

LAX Arrivals near La Habra Heights

Presented to: Los Angeles Round Table

By: WSC Operations Support Group

Date: September 14, 2011



Federal Aviation
Administration



Parameters

- **Performance Data Analysis and Reporting System (PDARS) used for analysis**
- **Traffic for 2004 not available to system, so analysis started in 2005**
- **Analyzed select January and July weeks for 2005, 2008, 2009 and 2011**
- **Analyzed only arrivals from the east landing straight-in**
- **Arrivals that originated at nearby airports such as ONT and PSP have been filtered out due to level flight over La Habra Heights**



LAX Arrival Flow

1/14/2011

LAX Class B



5000

7000

LAX

ONT

CNO

La Habra Hts

GAATE

FUELR

SLI VOR

LAX Class B



LAWA Flight Track Comparison

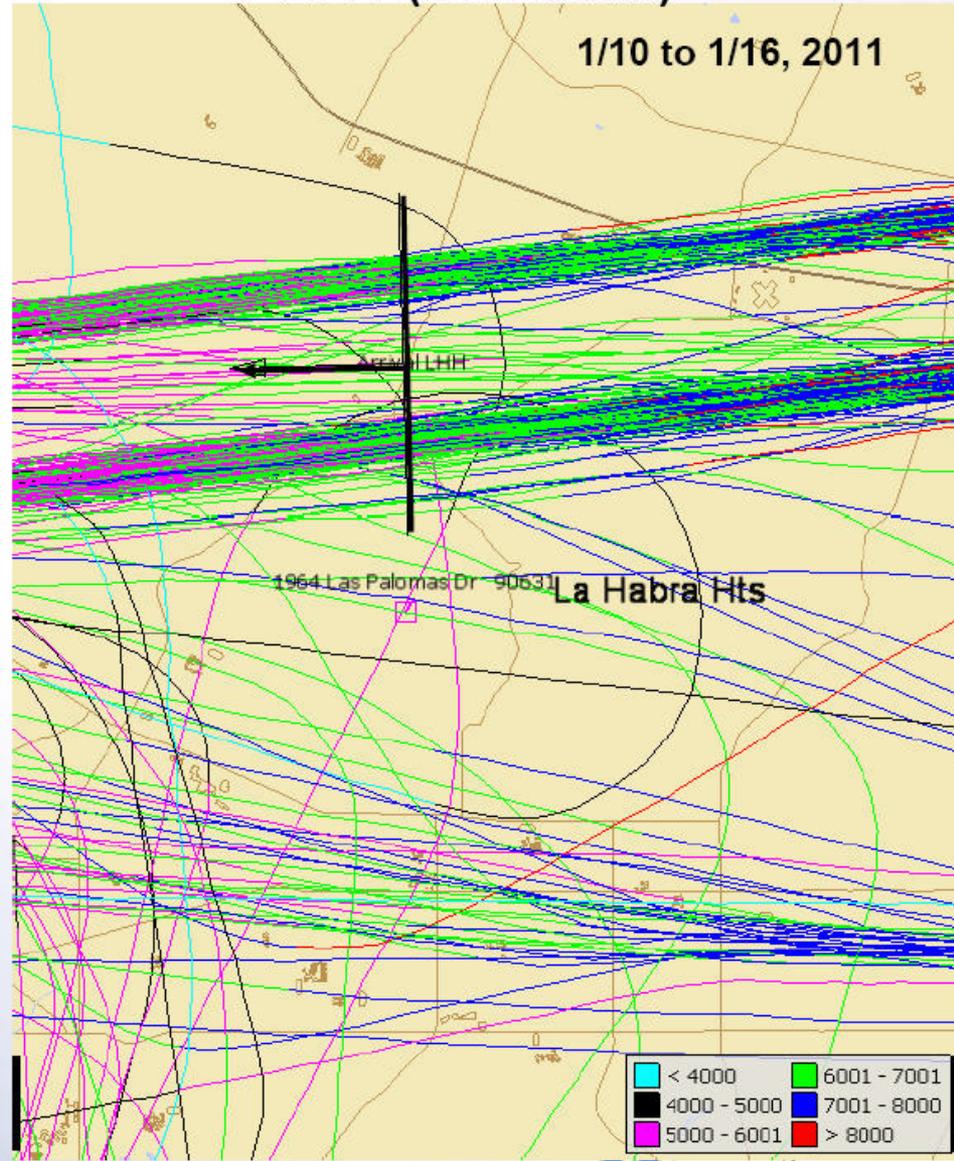
2004 (One Week)

1/10 to 1/16, 2004



2011 (One Week)

1/10 to 1/16, 2011



FAA Flight Track Comparison

2005 (One Week)

[2004 traffic data not available]

1/10 to 1/16, 2005

La Habra Hgts

2011 (One Week)

1/10 to 1/16, 2011

La Habra Hgts

Altitude (100s ft)

From	To	Color
0	40	Cyan
40	50	Black
50	60	Magenta
60	70	Green
70	80	Blue
80	999	Red

PDARS Analysis

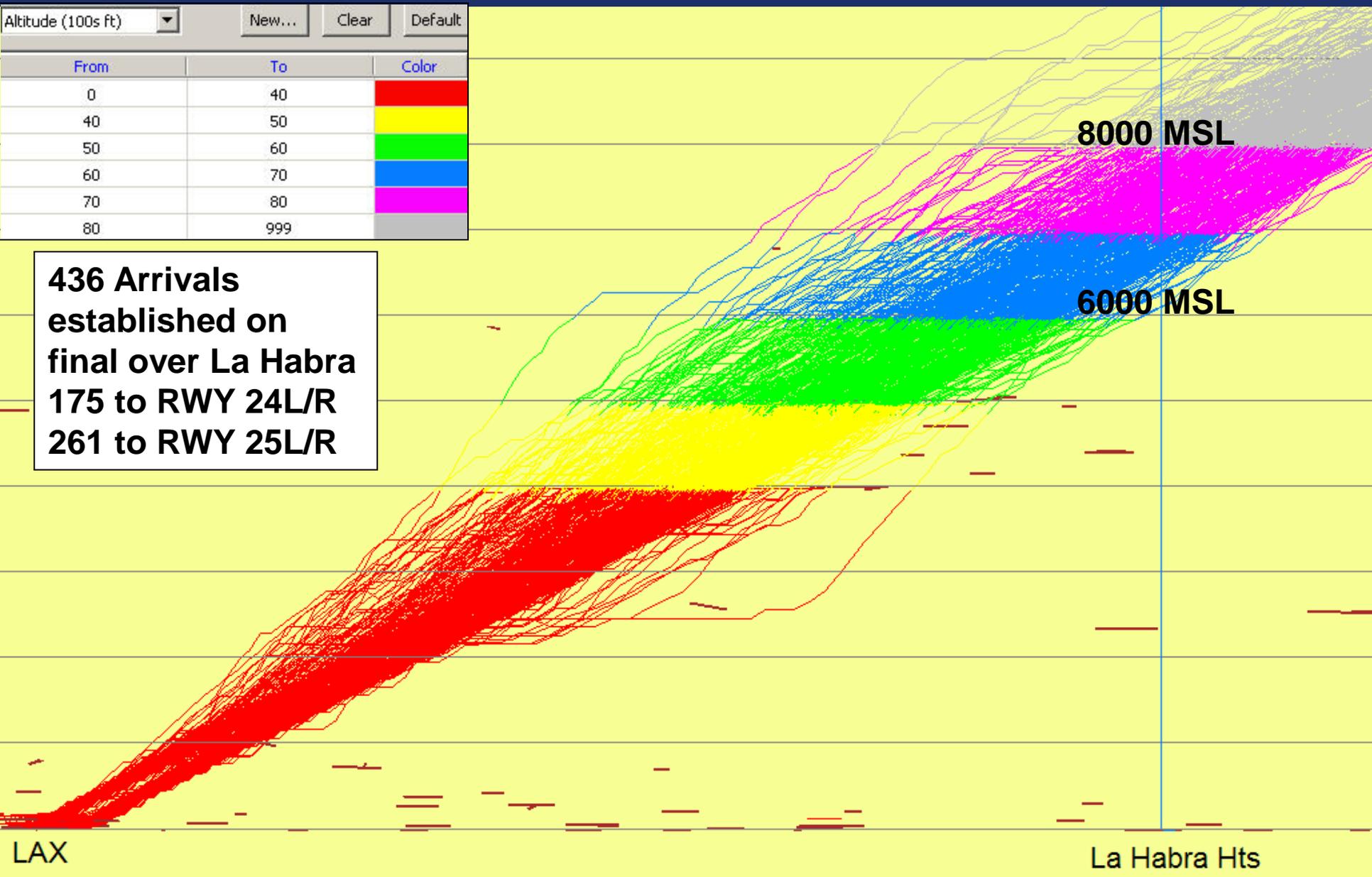
- The following slides show a single day of traffic from each of the weeks analyzed
- The slides depict a side view of traffic through a column of airspace over La Habra Heights



LAX Arrivals 1/14/2005

Altitude (100s ft) ▾			New...	Clear	Default
From	To	Color			
0	40	Red			
40	50	Yellow			
50	60	Green			
60	70	Blue			
70	80	Magenta			
80	999	Grey			

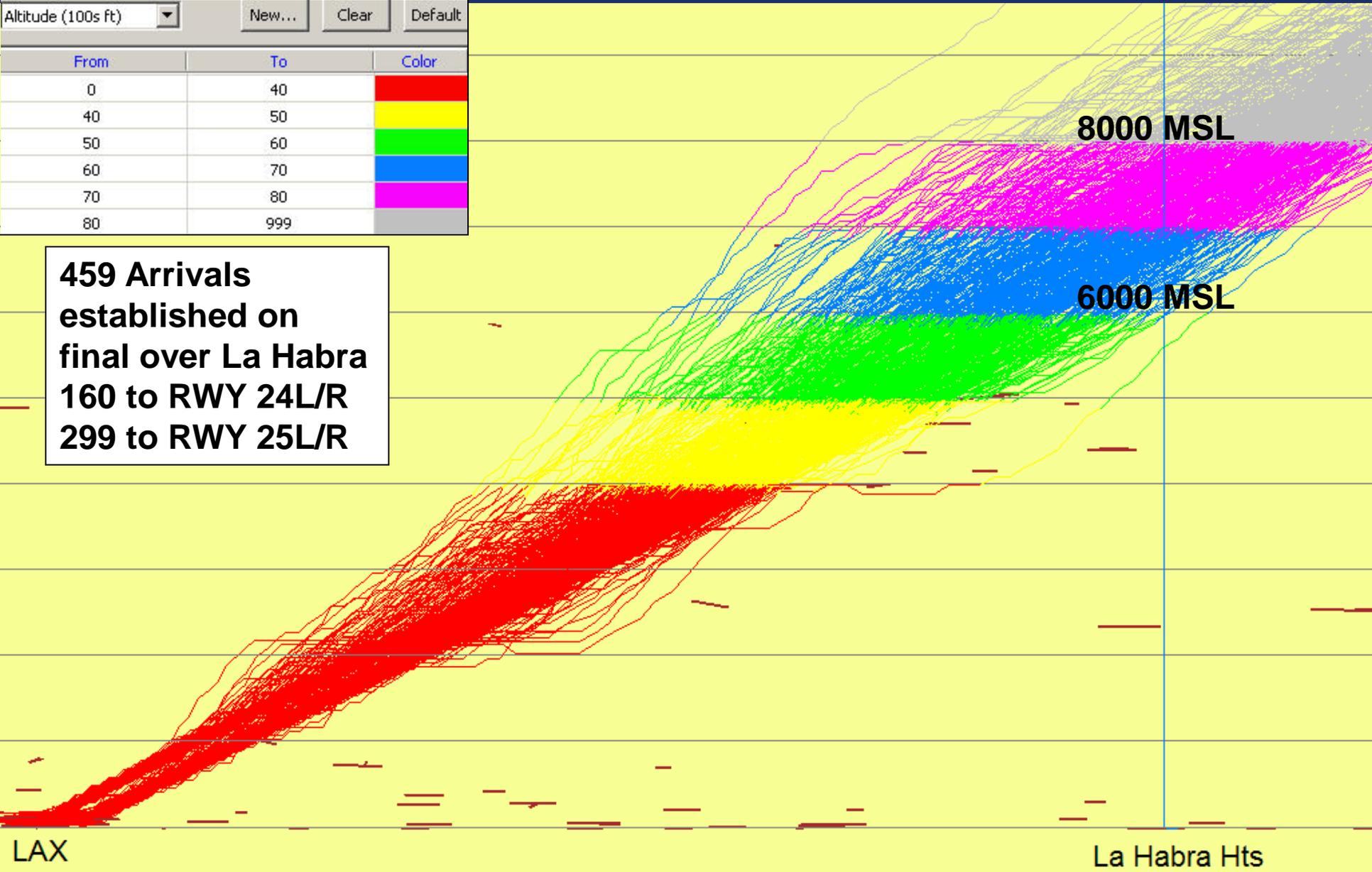
**436 Arrivals
established on
final over La Habra
175 to RWY 24L/R
261 to RWY 25L/R**



LAX Arrivals 7/14/2005

Altitude (100s ft) ▾			New...	Clear	Default
From	To	Color			
0	40	Red			
40	50	Yellow			
50	60	Green			
60	70	Blue			
70	80	Magenta			
80	999	Grey			

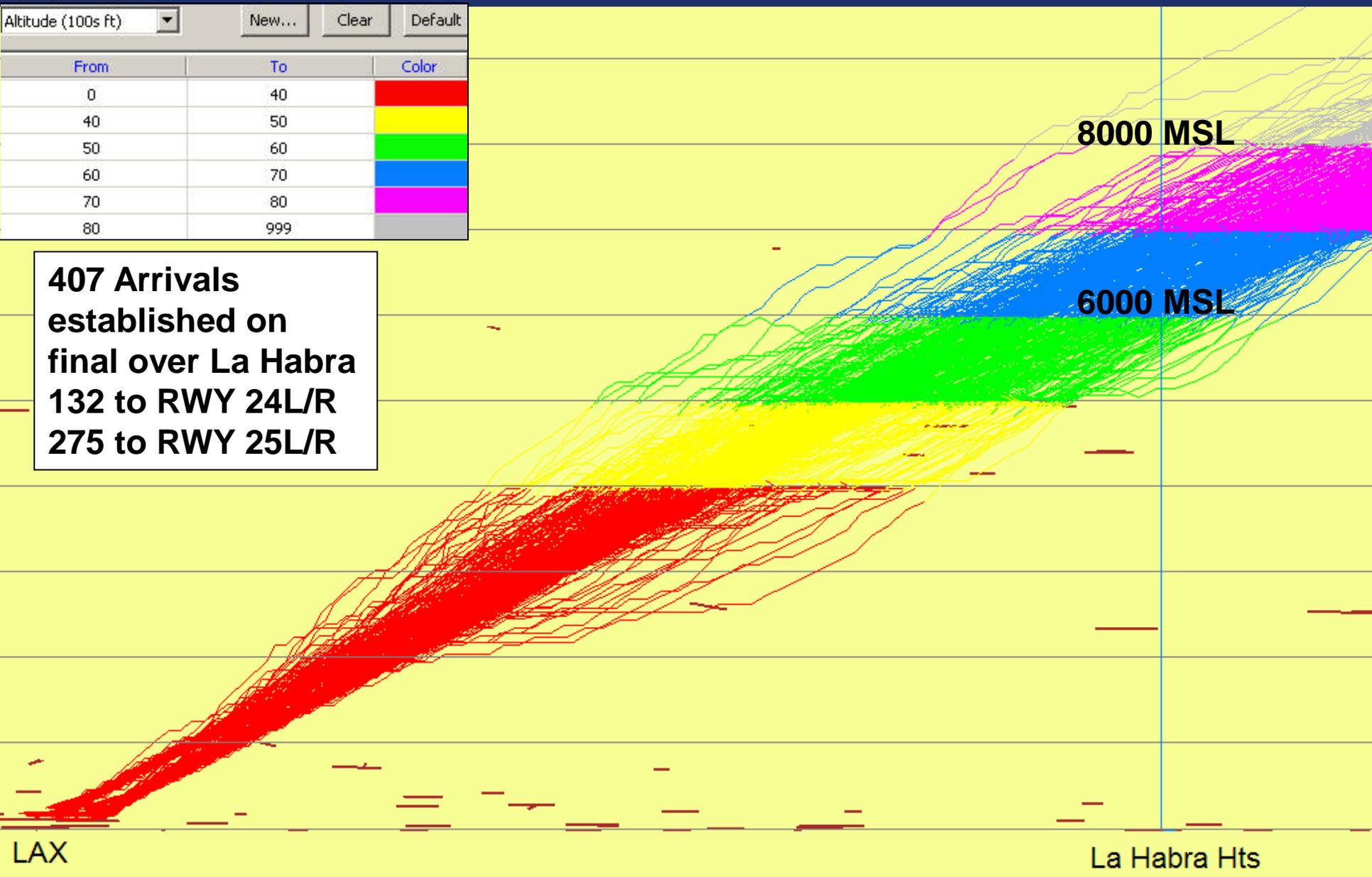
**459 Arrivals
established on
final over La Habra
160 to RWY 24L/R
299 to RWY 25L/R**



LAX Arrivals 1/14/2008

Altitude (100s ft) ▾			New...	Clear	Default
From	To	Color			
0	40	Red			
40	50	Yellow			
50	60	Green			
60	70	Blue			
70	80	Magenta			
80	999	Grey			

**407 Arrivals
established on
final over La Habra
132 to RWY 24L/R
275 to RWY 25L/R**



8000 MSL

6000 MSL

LAX

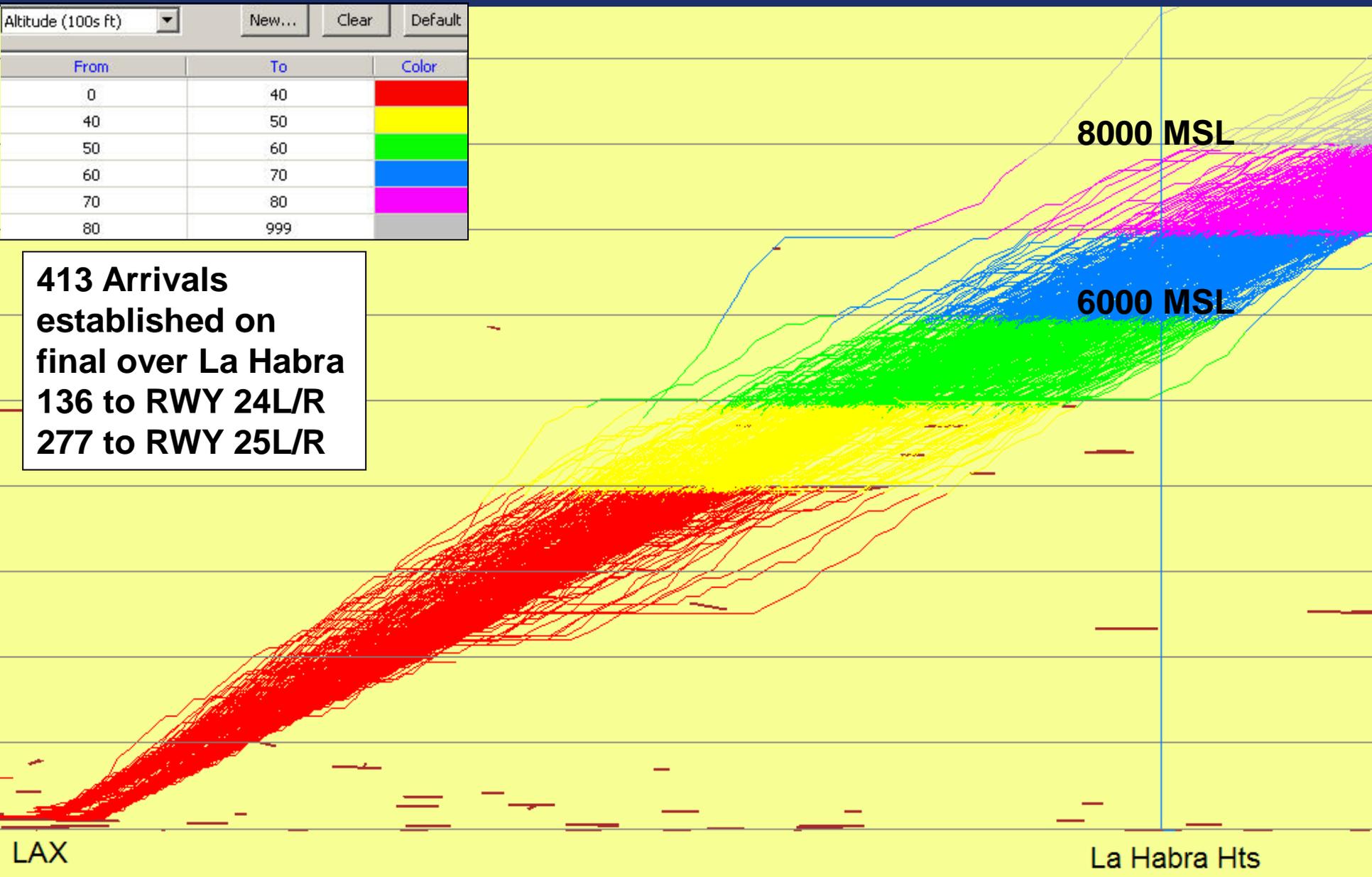
La Habra Hts

LAX Arrivals 7/14/2008

Altitude (100s ft)

From	To	Color
0	40	Red
40	50	Yellow
50	60	Green
60	70	Blue
70	80	Magenta
80	999	Grey

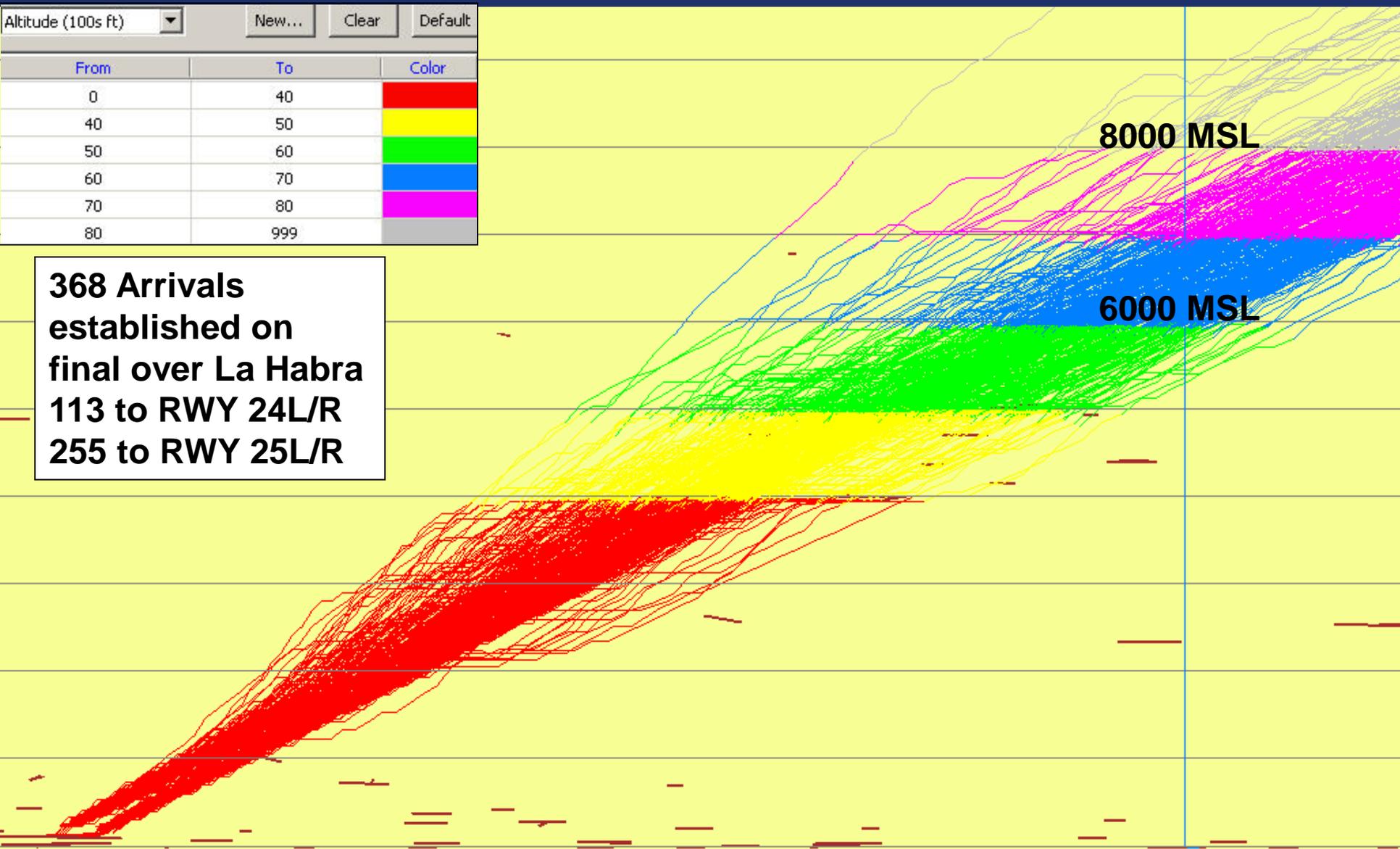
**413 Arrivals
established on
final over La Habra
136 to RWY 24L/R
277 to RWY 25L/R**



LAX Arrivals 1/14/2009

Altitude (100s ft) ▾			New...	Clear	Default
From	To	Color			
0	40	Red			
40	50	Yellow			
50	60	Green			
60	70	Blue			
70	80	Magenta			
80	999	Grey			

**368 Arrivals
established on
final over La Habra
113 to RWY 24L/R
255 to RWY 25L/R**



8000 MSL

6000 MSL

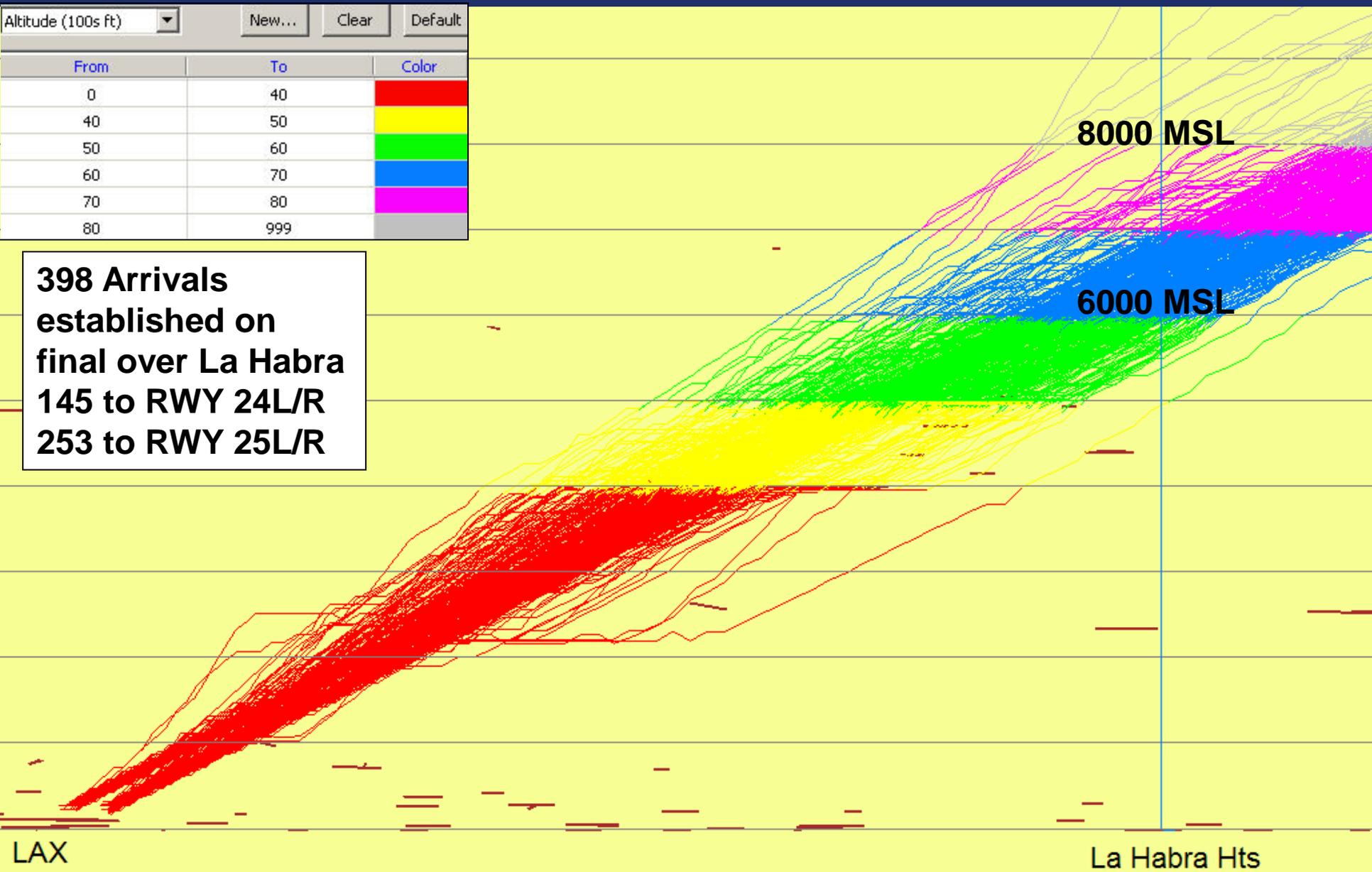
LAX

La Habra Hts

LAX Arrivals 7/14/2009

From	To	Color
0	40	Red
40	50	Yellow
50	60	Green
60	70	Blue
70	80	Magenta
80	999	Grey

**398 Arrivals
established on
final over La Habra
145 to RWY 24L/R
253 to RWY 25L/R**



8000 MSL

6000 MSL

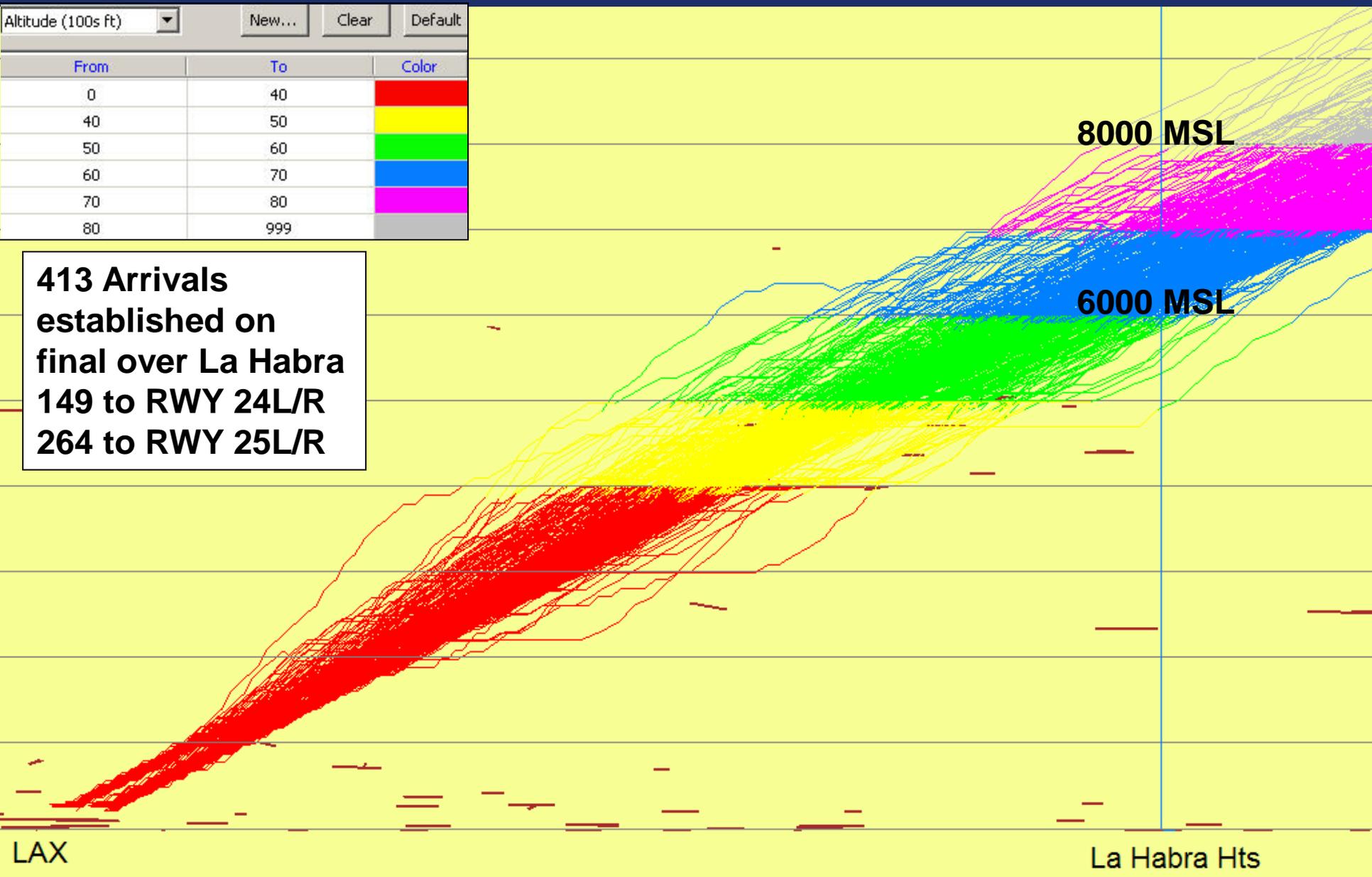
LAX

La Habra Hts

LAX Arrivals 1/14/2011

From	To	Color
0	40	Red
40	50	Yellow
50	60	Green
60	70	Blue
70	80	Magenta
80	999	Grey

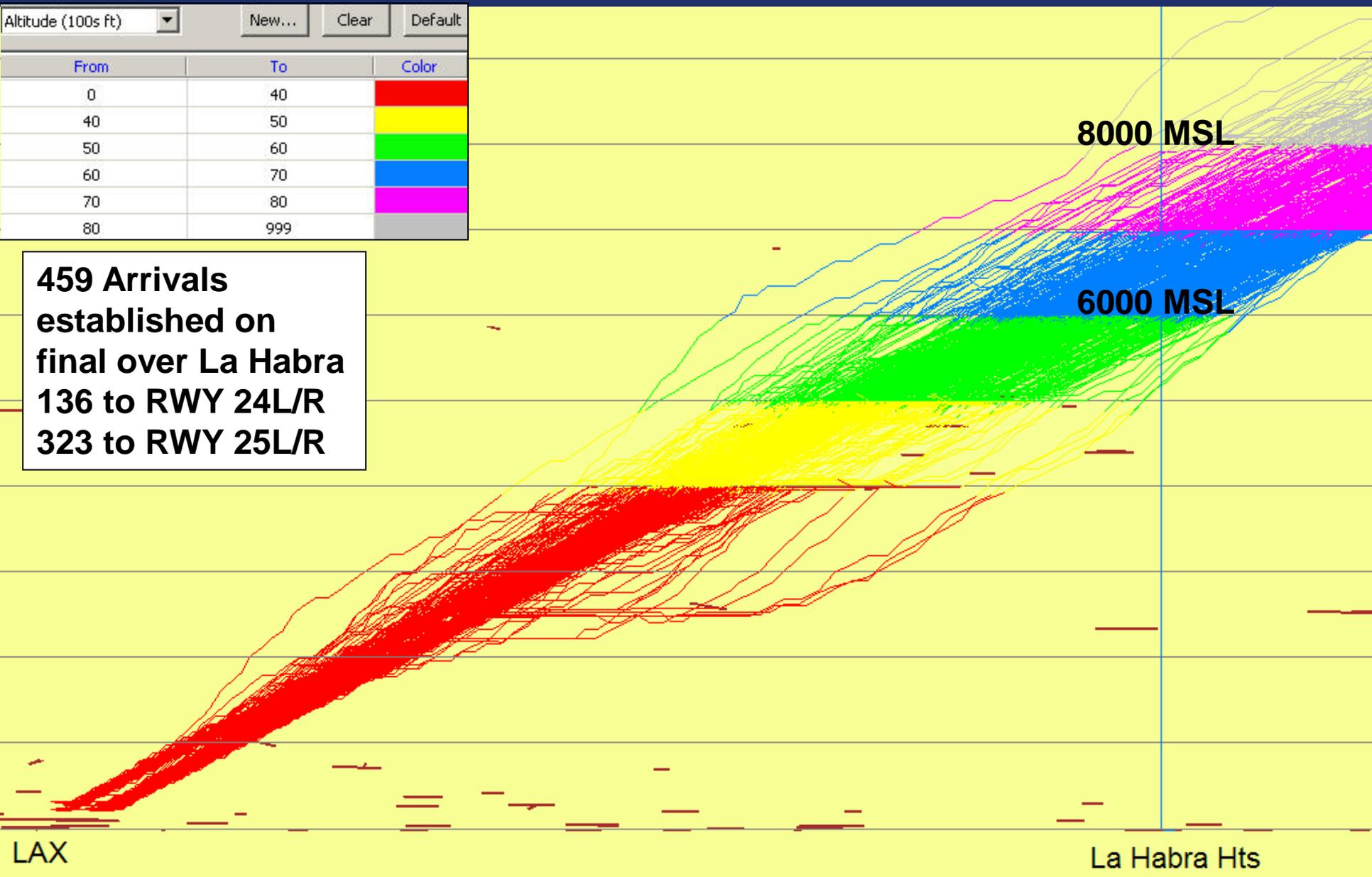
**413 Arrivals
established on
final over La Habra
149 to RWY 24L/R
264 to RWY 25L/R**



LAX Arrivals 7/14/2011

From	To	Color
0	40	Red
40	50	Yellow
50	60	Green
60	70	Blue
70	80	Magenta
80	999	Grey

**459 Arrivals
established on
final over La Habra
136 to RWY 24L/R
323 to RWY 25L/R**



PDARS Analysis

- The following slides depict an entire week of traffic displayed on a background of satellite imagery
- Only arrivals landing straight-in from the east are included
- Arrivals that originated at nearby airports such as ONT and PSP have been filtered out due to level flight over La Habra Heights



Jan 10-16, 2005

6008 total LAX arrivals

2480* straight-in arrivals over
La Habra Heights

*ONT, PSP & other local
departures filtered out
due to level flight over
La Habra Heights

LAX

←4.5NM→

La Habra Heights

Altitude (100s ft) ▾ New... Clear Default

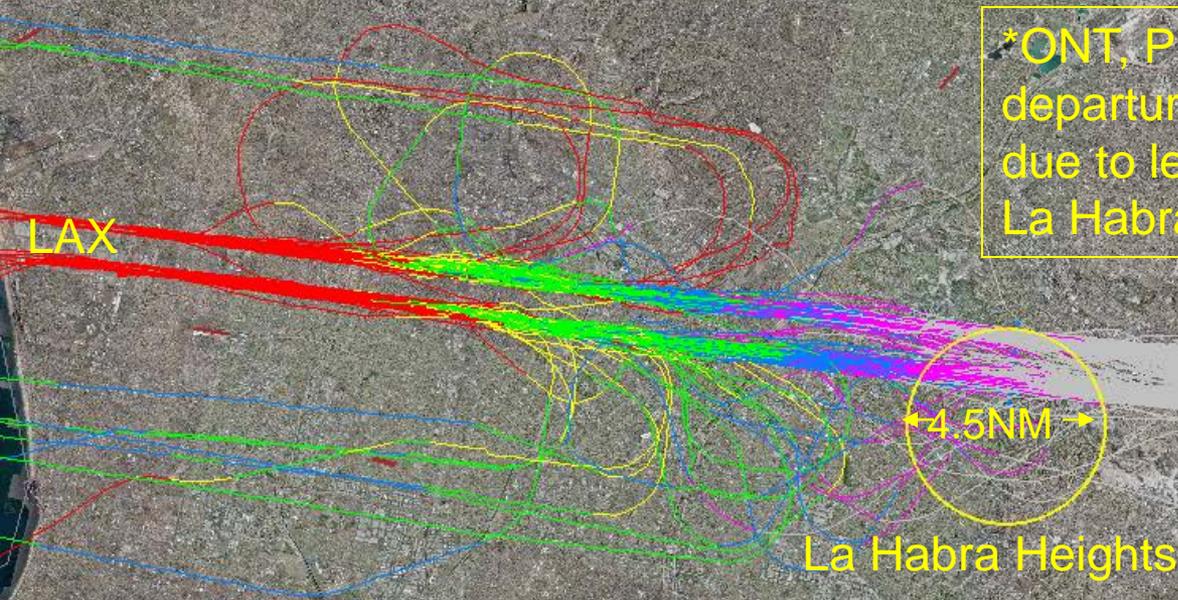
From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

July 10-16, 2005

6451 total LAX arrivals

3213* straight-in arrivals over La Habra Heights

*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights



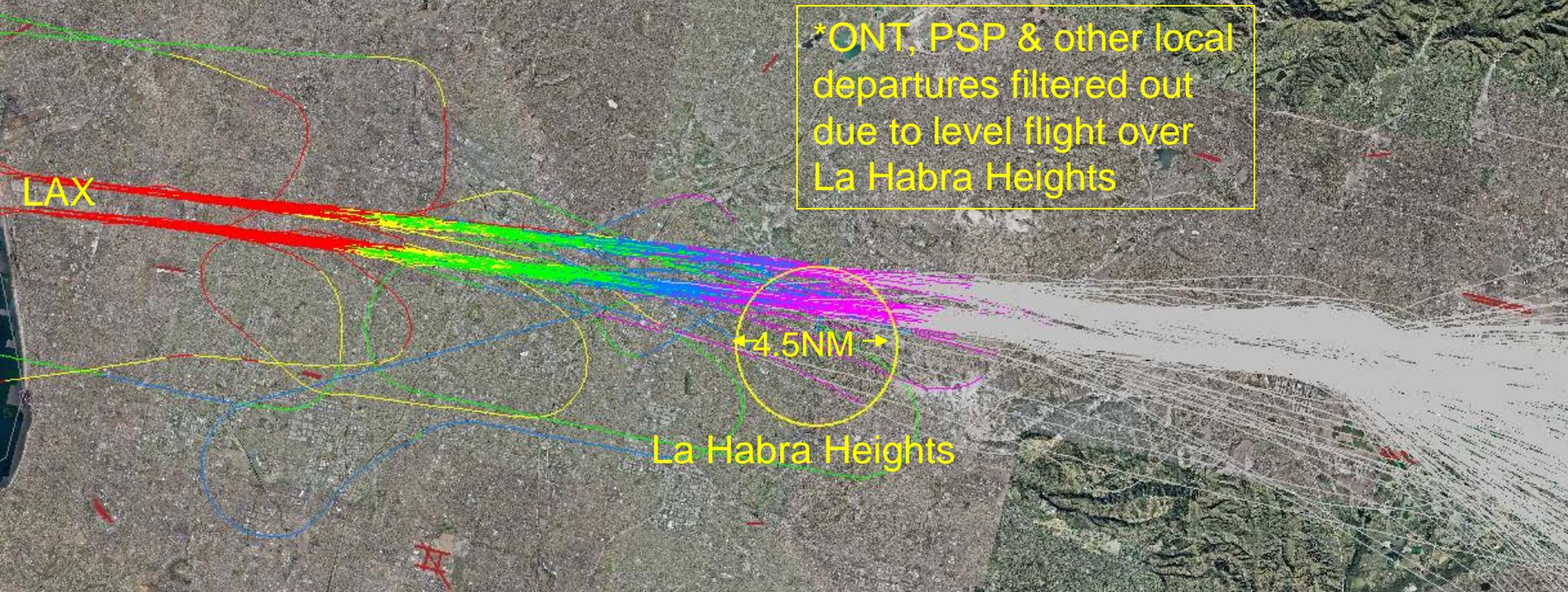
From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

Jan 10-16, 2008

5999 total LAX arrivals

2777* straight-in arrivals over
La Habra Heights

*ONT, PSP & other local
departures filtered out
due to level flight over
La Habra Heights



Altitude (100s ft)

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

July 10-16, 2008

6346 total LAX arrivals

2971* straight-in arrivals over
La Habra Heights

*ONT, PSP & other local
departures filtered out
due to level flight over
La Habra Heights

LAX

←4.5NM→

La Habra Heights

Altitude (100s ft)	New...	Clear	Default
From	To	Color	
0	30	Red	
30	40	Yellow	
40	50	Green	
50	60	Blue	
60	70	Magenta	
70	999	Grey	

Jan 10-16, 2009

5047 total LAX arrivals

2469* straight-in arrivals over
La Habra Heights

*ONT, PSP & other local
departures filtered out
due to level flight over
La Habra Heights

LAX

←4.5NM→

La Habra Heights

Altitude (100s ft)

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

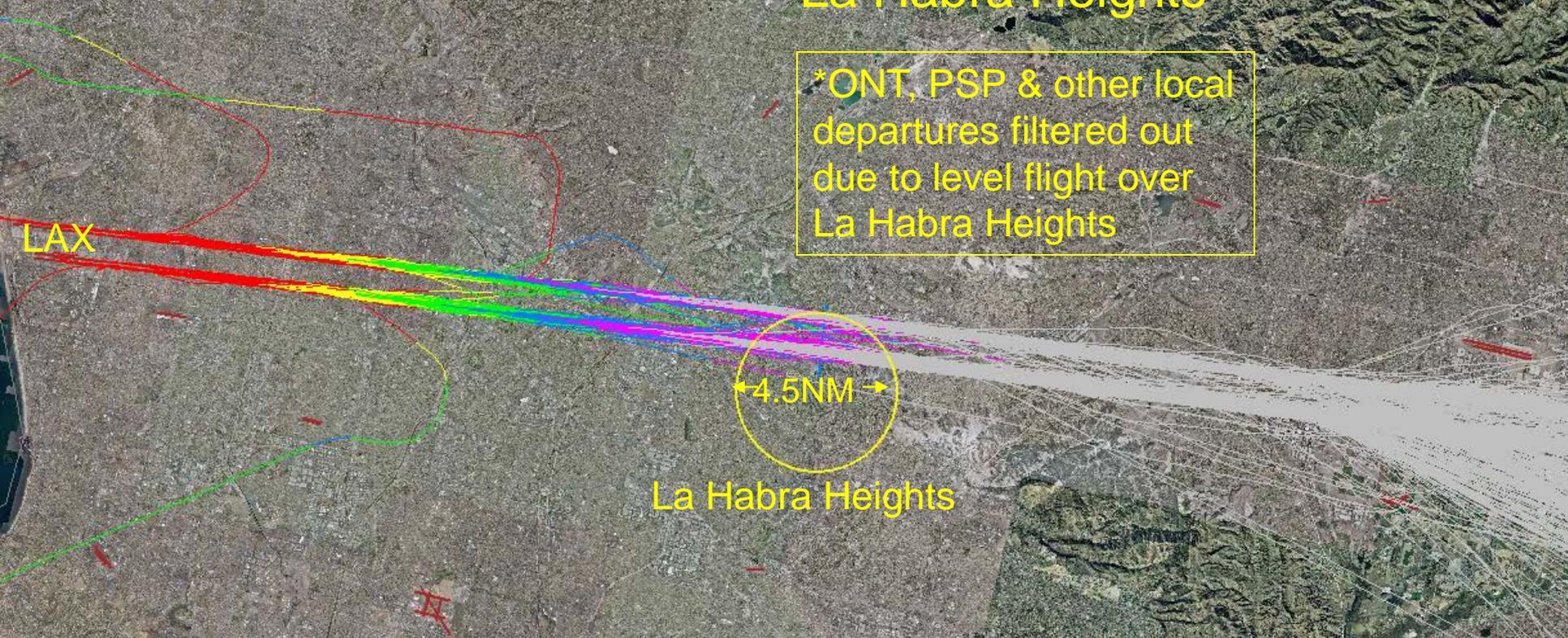


July 10-16, 2009

5638 total LAX arrivals

2794* straight-in arrivals over
La Habra Heights

*ONT, PSP & other local
departures filtered out
due to level flight over
La Habra Heights



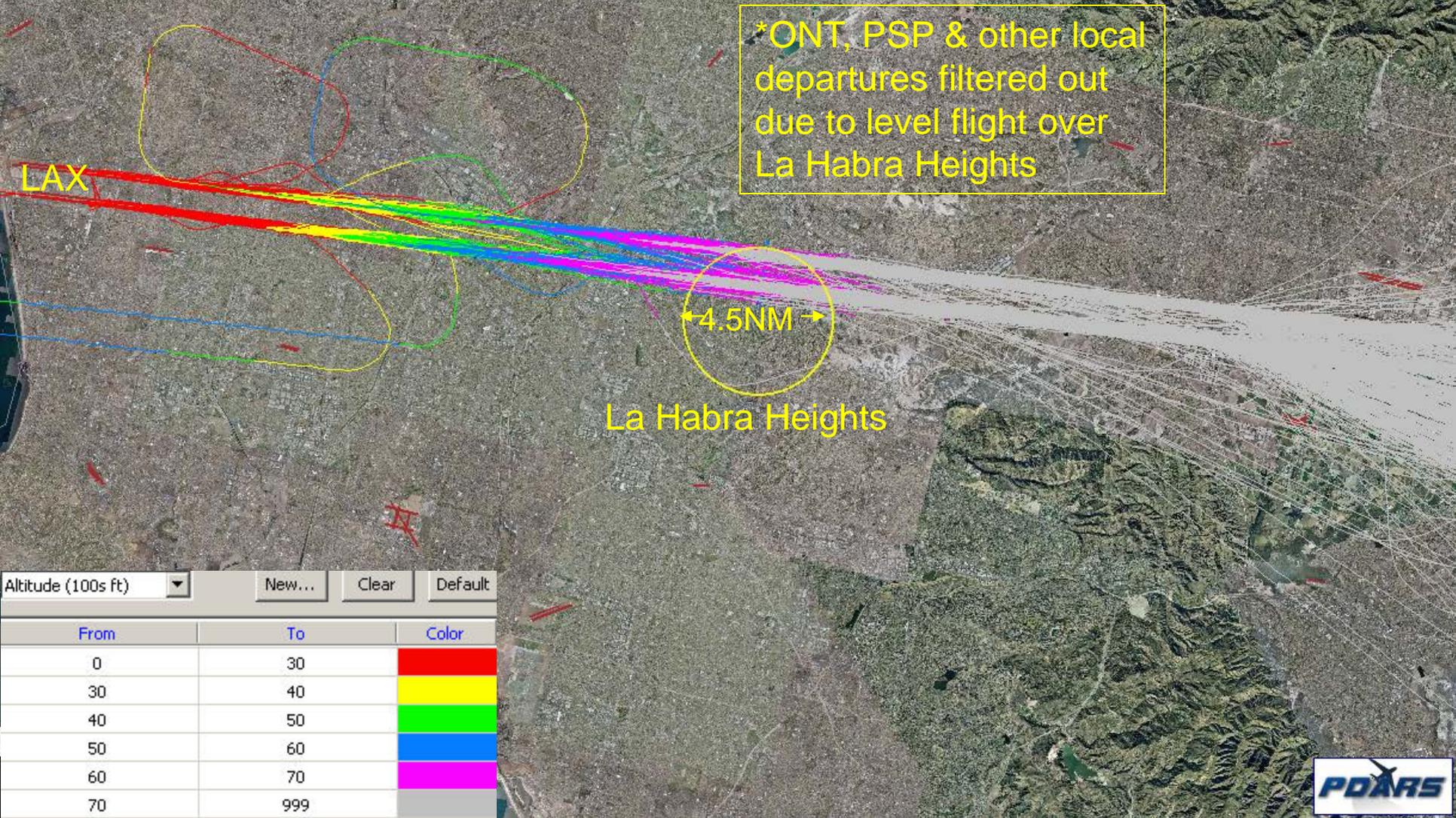
From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

Jan 10-16, 2011

5279 total LAX arrivals

2623* straight-in arrivals over
La Habra Heights

*ONT, PSP & other local
departures filtered out
due to level flight over
La Habra Heights



Altitude (100s ft)

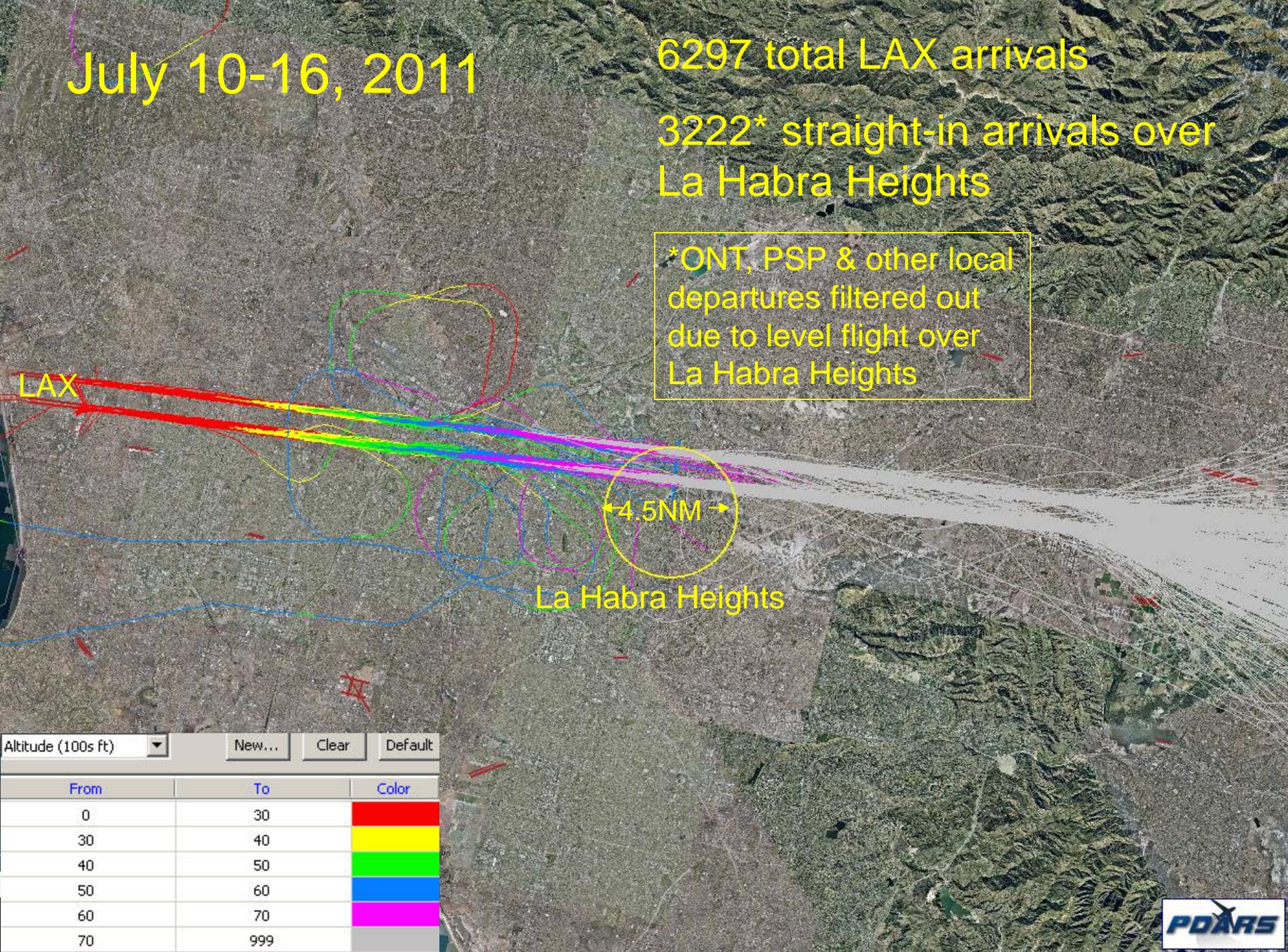
From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

July 10-16, 2011

6297 total LAX arrivals

3222* straight-in arrivals over
La Habra Heights

*ONT, PSP & other local
departures filtered out
due to level flight over
La Habra Heights



Altitude (100s ft)

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

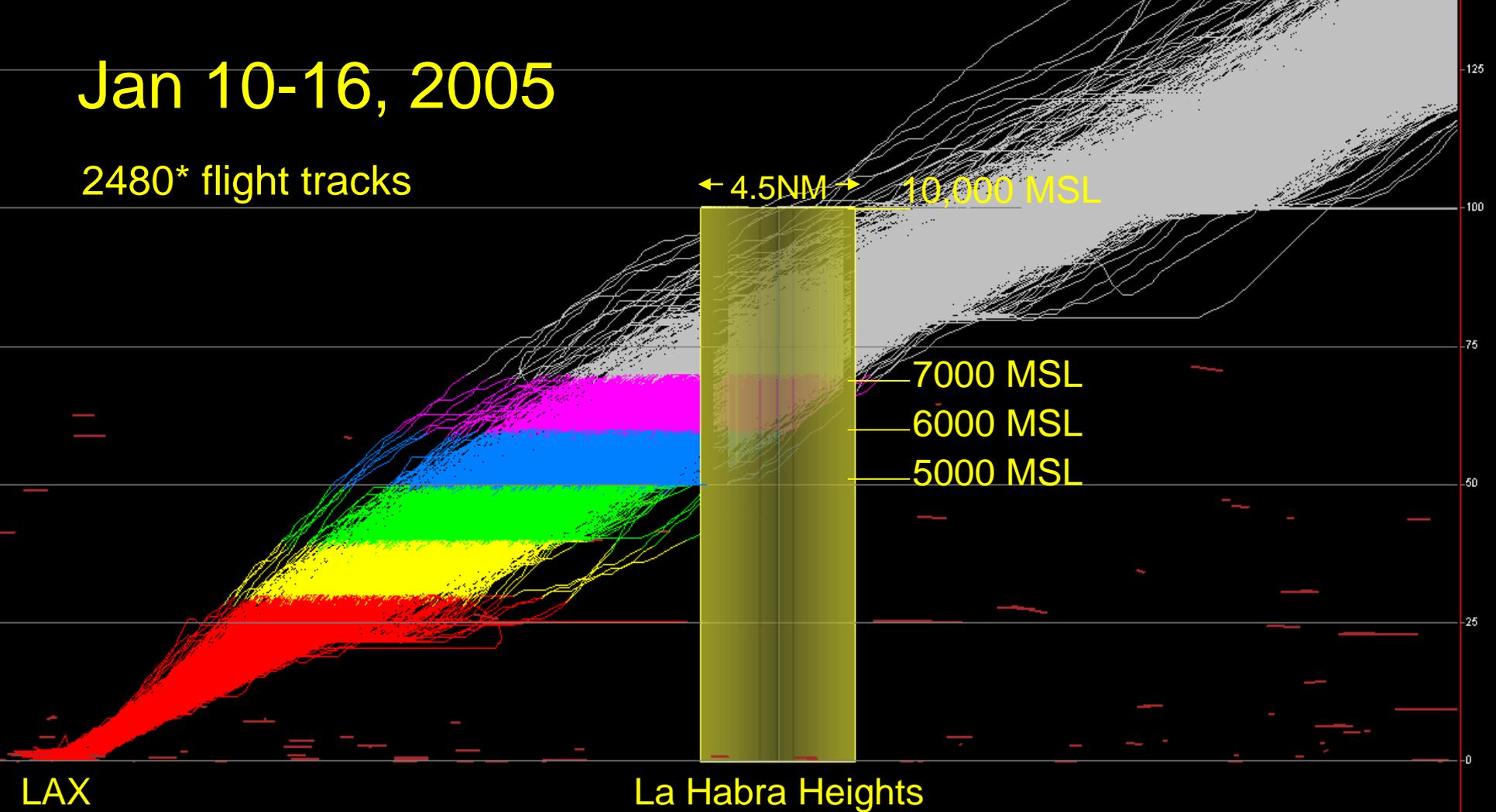
PDARS Analysis

- The following slides show a side view of an entire week of traffic for the weeks analyzed
- Arrivals that originated at nearby airports such as ONT and PSP have been filtered out due to level flight over La Habra Heights



Jan 10-16, 2005

2480* flight tracks



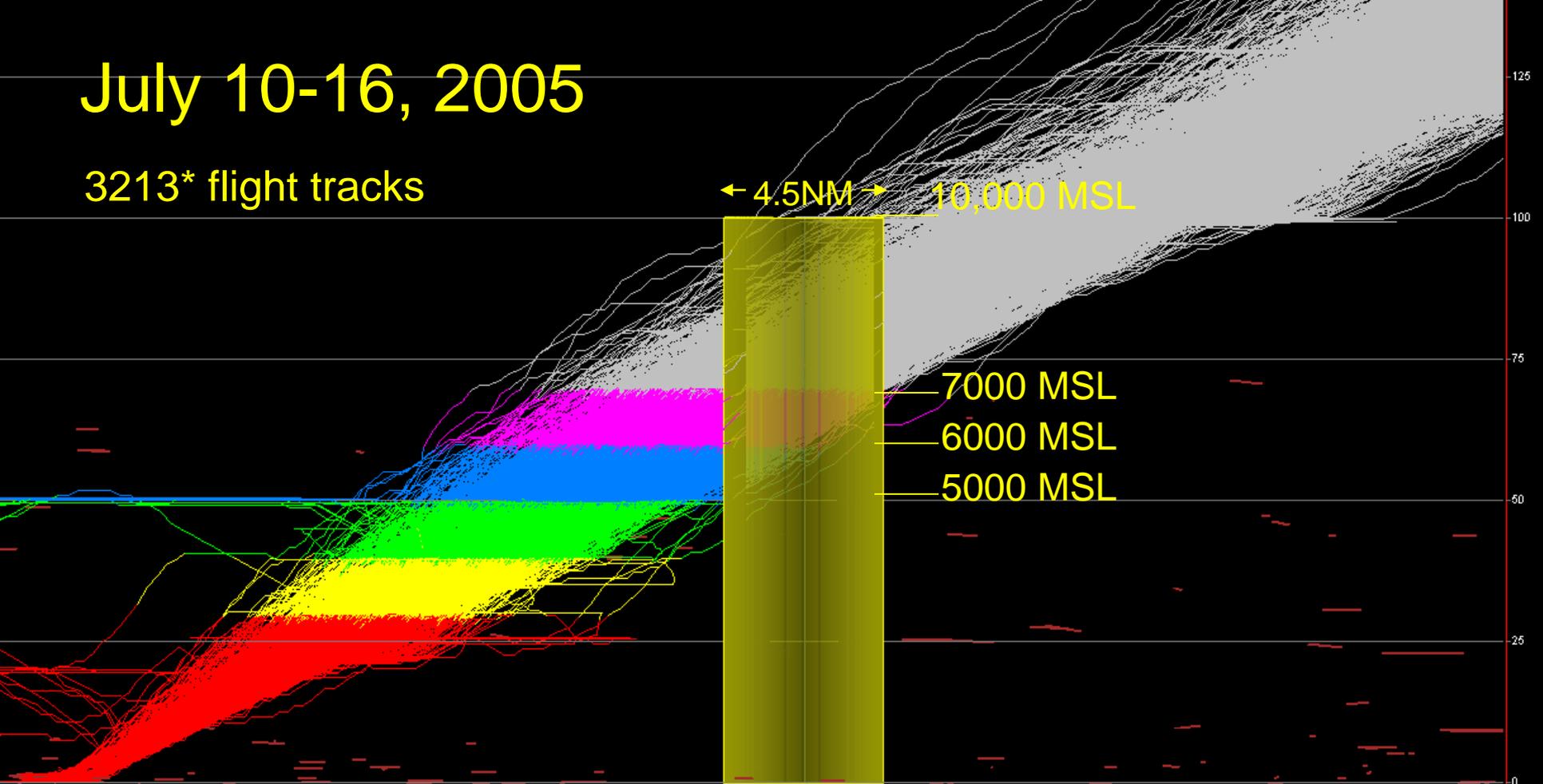
*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

Altitude (100s ft) [v] [New...] [Clear] [Default]

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

July 10-16, 2005

3213* flight tracks



LAX

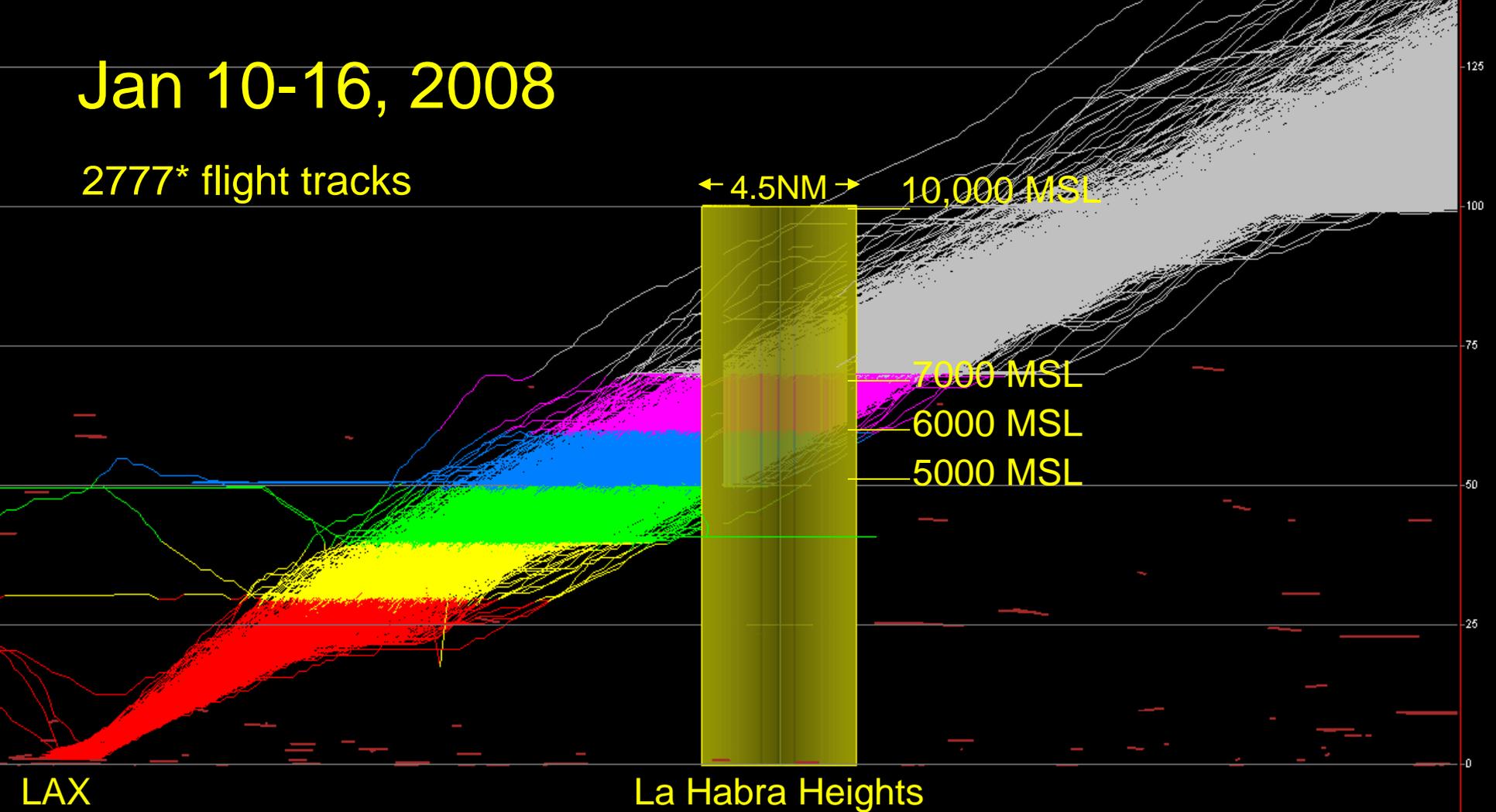
La Habra Heights

*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

Jan 10-16, 2008

2777* flight tracks

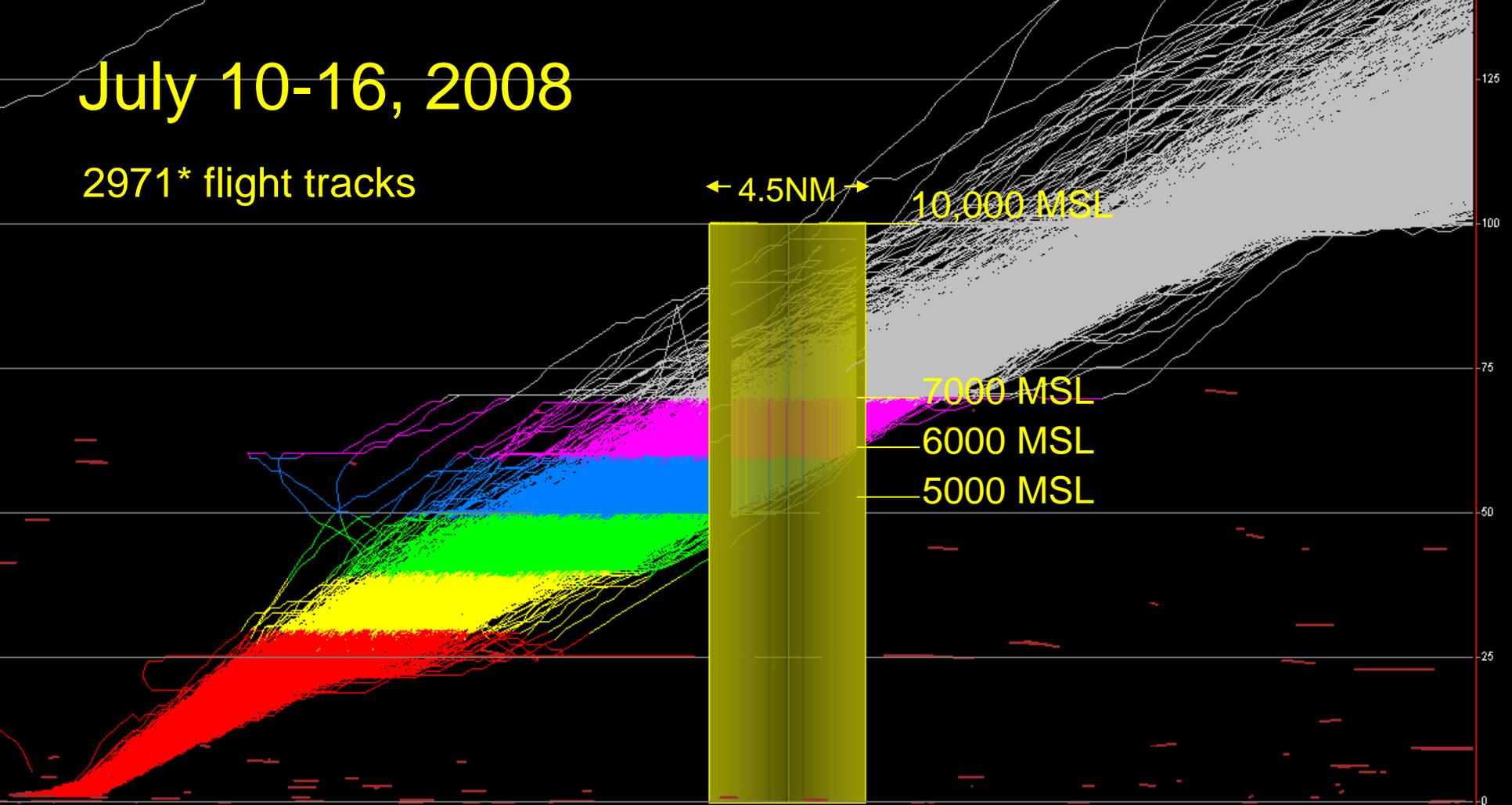


*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

July 10-16, 2008

2971* flight tracks



LAX

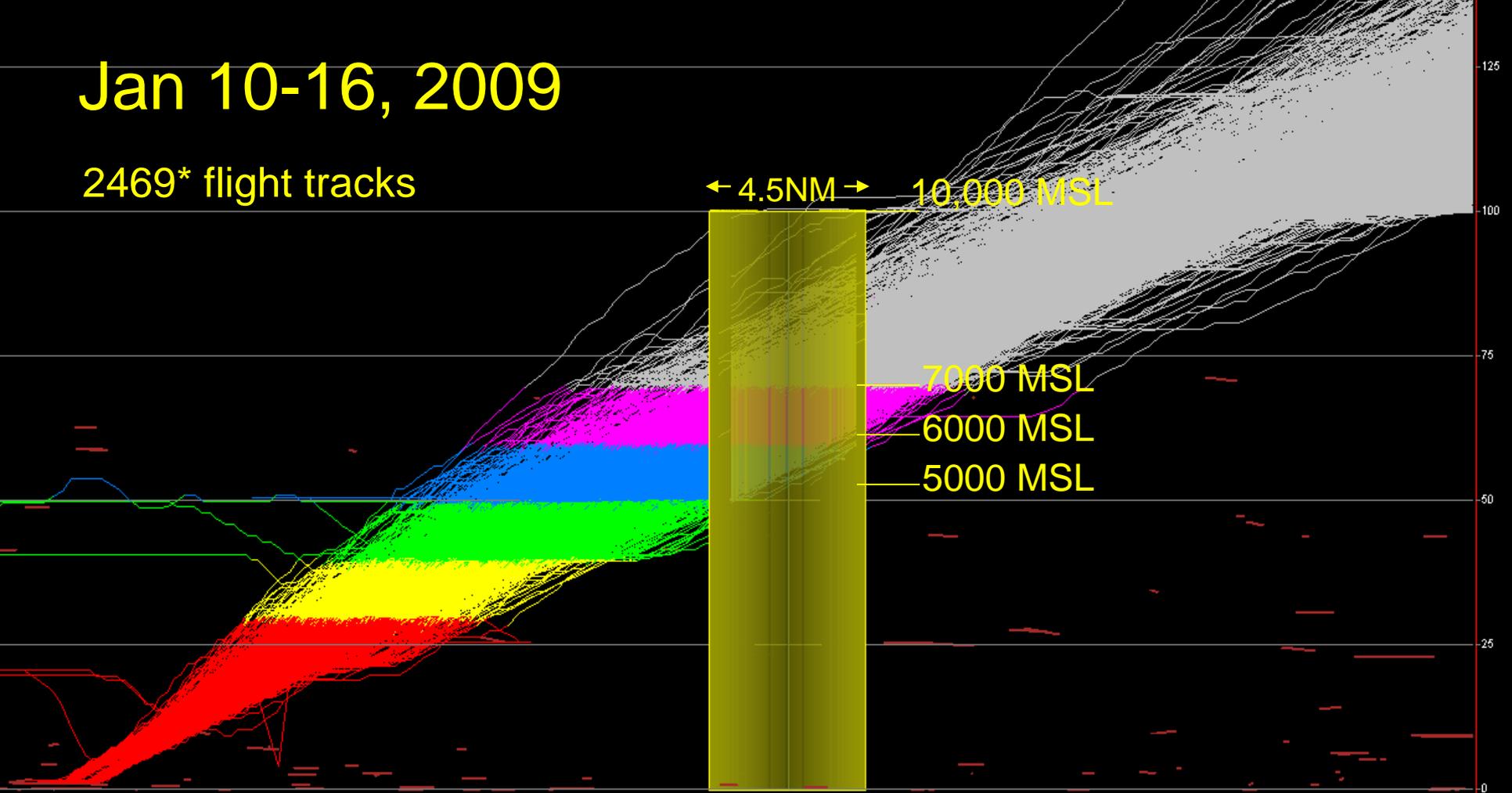
La Habra Heights

*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

Jan 10-16, 2009

2469* flight tracks



LAX

La Habra Heights

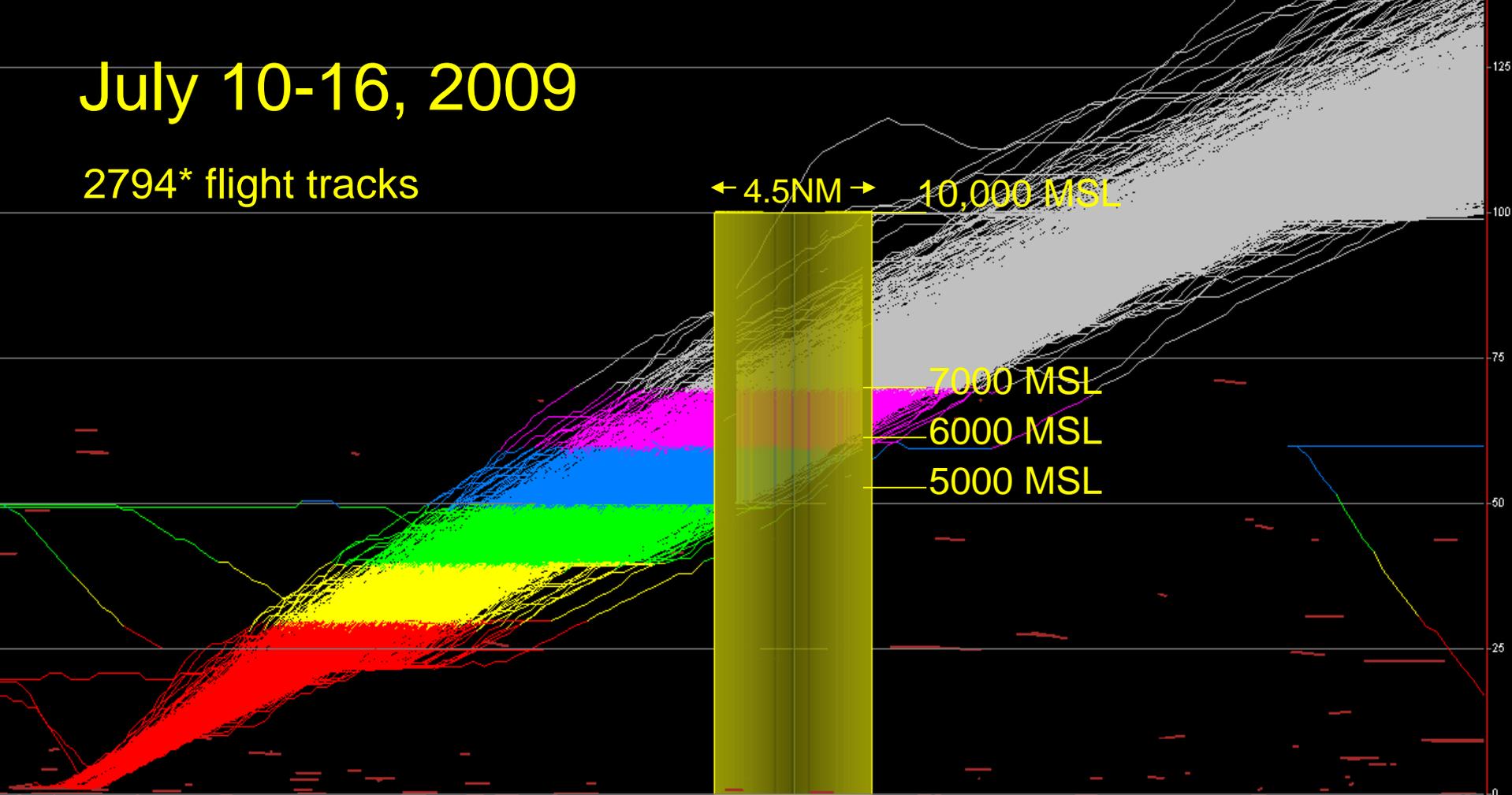
*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey



July 10-16, 2009

2794* flight tracks



LAX

La Habra Heights

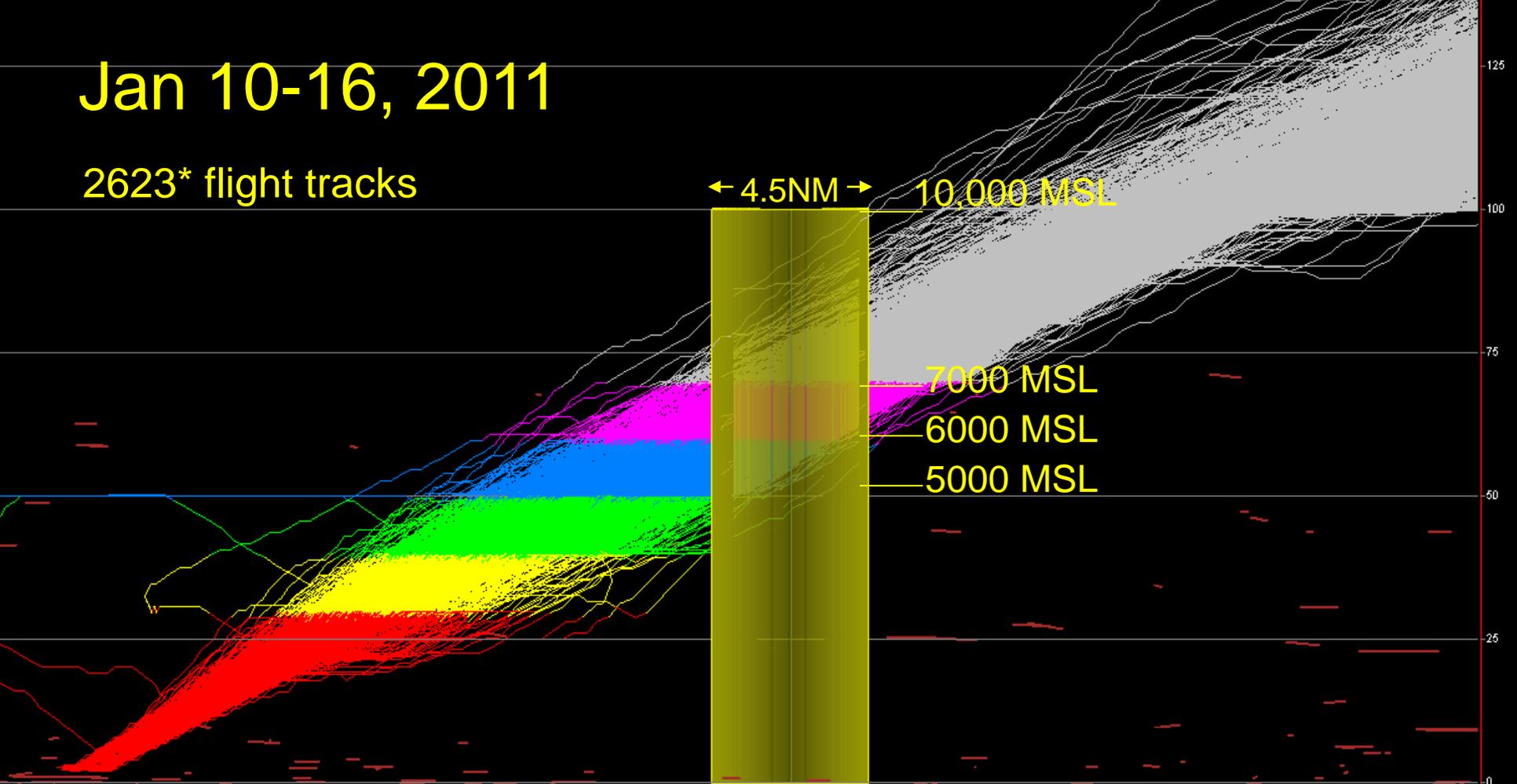
*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey



Jan 10-16, 2011

2623* flight tracks



LAX

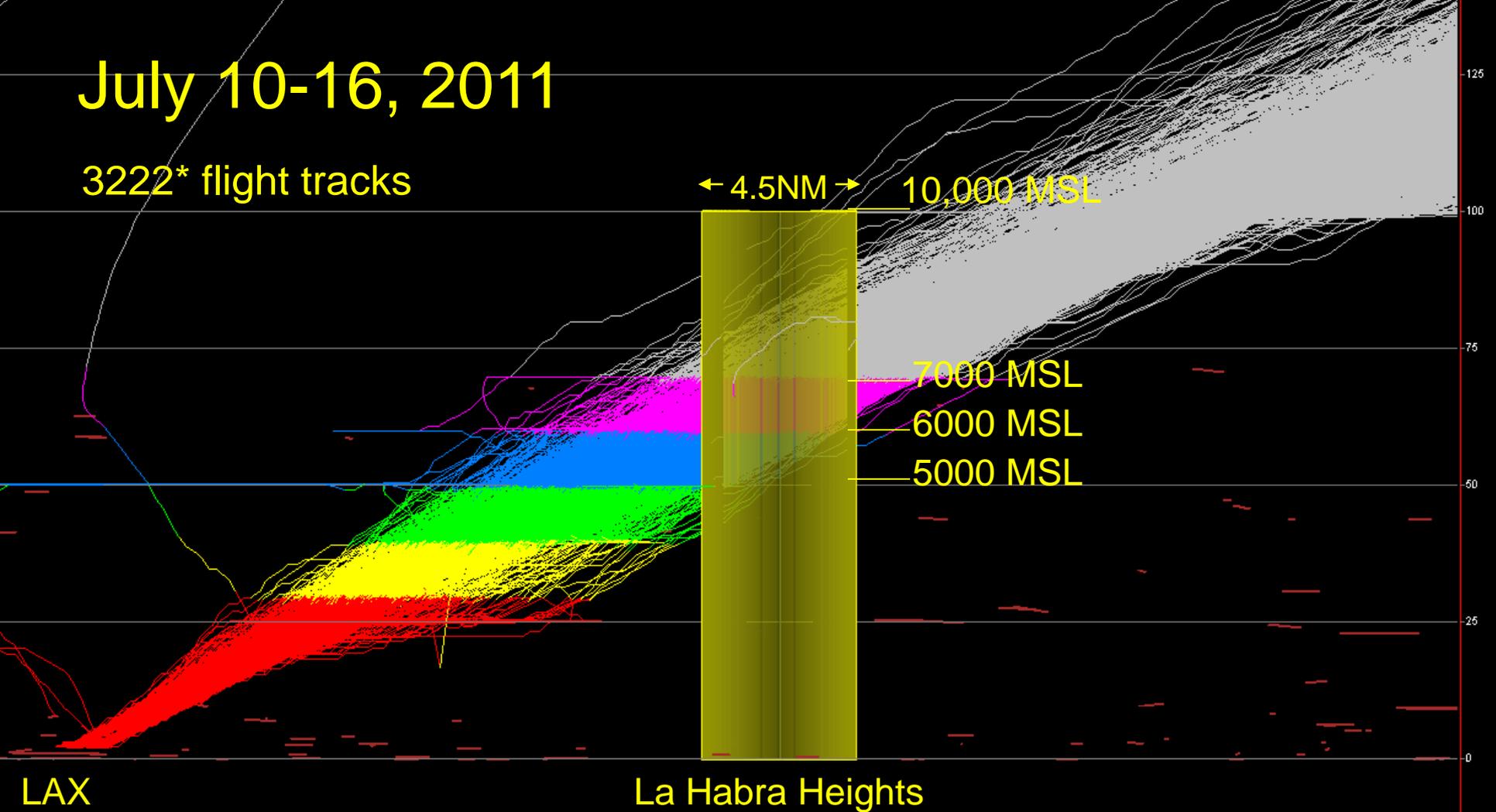
La Habra Heights

*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

July 10-16, 2011

3222* flight tracks

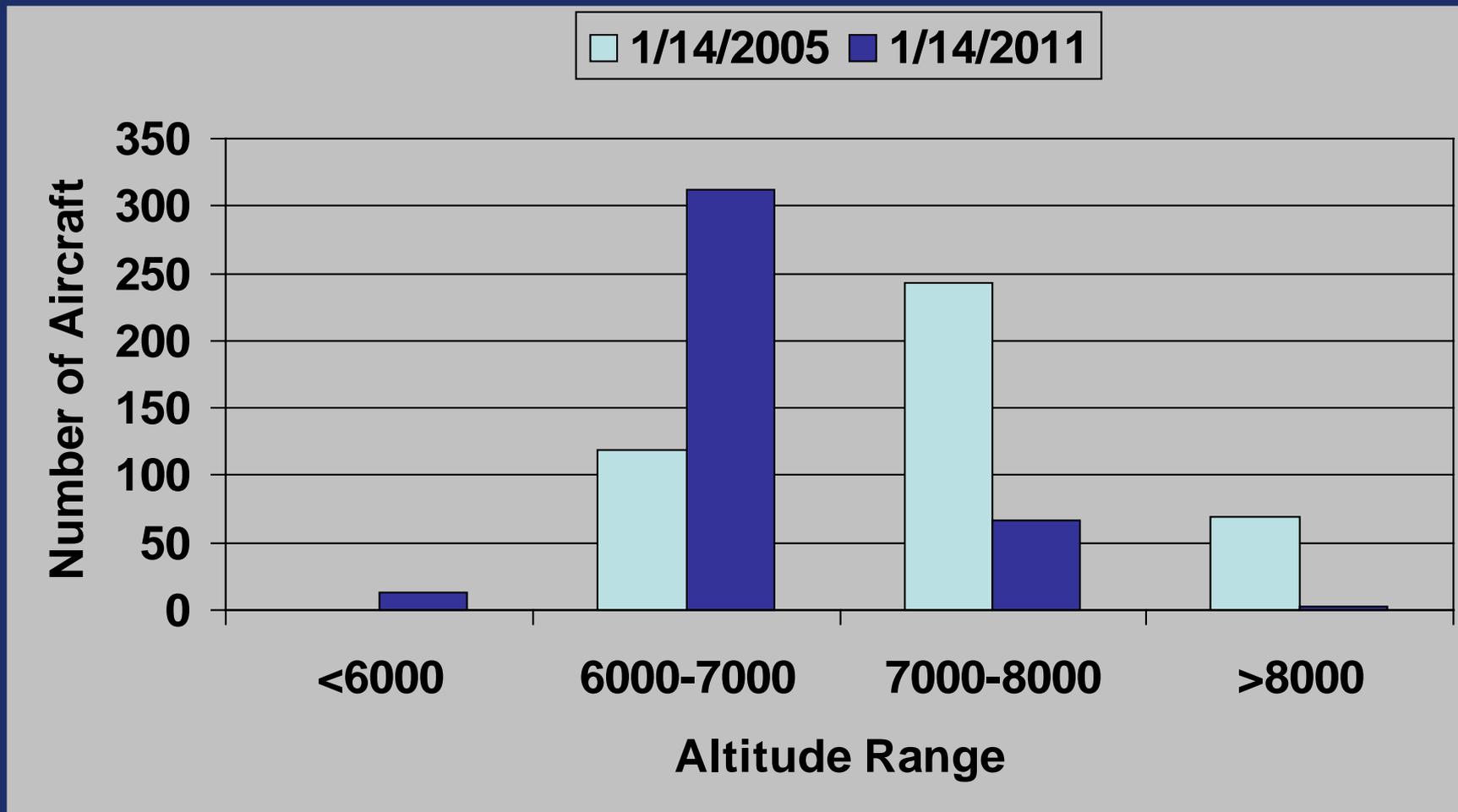


*ONT, PSP & other local departures filtered out due to level flight over La Habra Heights

From	To	Color
0	30	Red
30	40	Yellow
40	50	Green
50	60	Blue
60	70	Magenta
70	999	Grey

Arrival Altitude Comparison

Arrivals from nearby airports (ONT, PSP) not included



Arrival Altitude Comparison

- One day (January 14) from 2005 and 2011
- Average altitude in 2005 was 7400 ft MSL
- Average altitude in 2011 was 6600 ft MSL
- Arrivals originating from nearby airports such as ONT and PSP are not included due to level flight over La Habra Heights



Conclusions

- **Currently most LAX arrivals from the east are on a profile descent (SEAVU2 or RIIVR2 Arrival) that allows for a transition to RWY 24/25 ILS approaches**
- **Standard operating procedure for arrivals is to be cleared for ILS approach no later than 35 nautical miles (NM) out from runway**
 - The aircraft then meet the “at or above” descent altitudes until capturing the glide slope
- **La Habra Heights is approx. 20 NM from runway**
- **Aircraft may have variable descent rates depending on pilot technique and the onboard navigation capabilities of each aircraft**

Questions?

