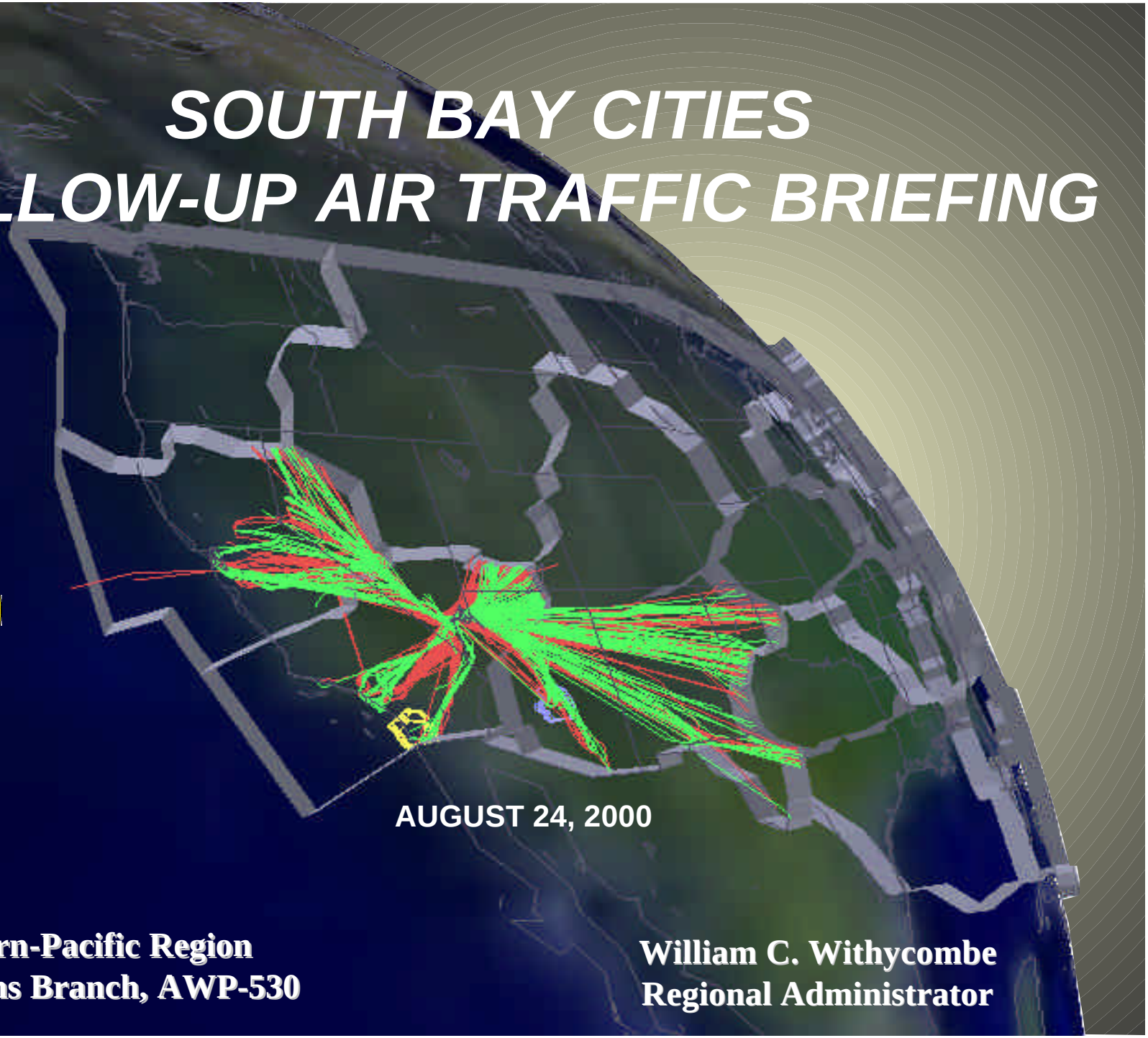
SOUTH BAY CITIES
FOLLOW-UP AIR TRAFFIC BRIEFING



AUGUST 24, 2000

Prepared by:

Western-Pacific Region
Operations Branch, AWP-530

William C. Withycombe
Regional Administrator

LOOP DEPARTURES

Before the Loop

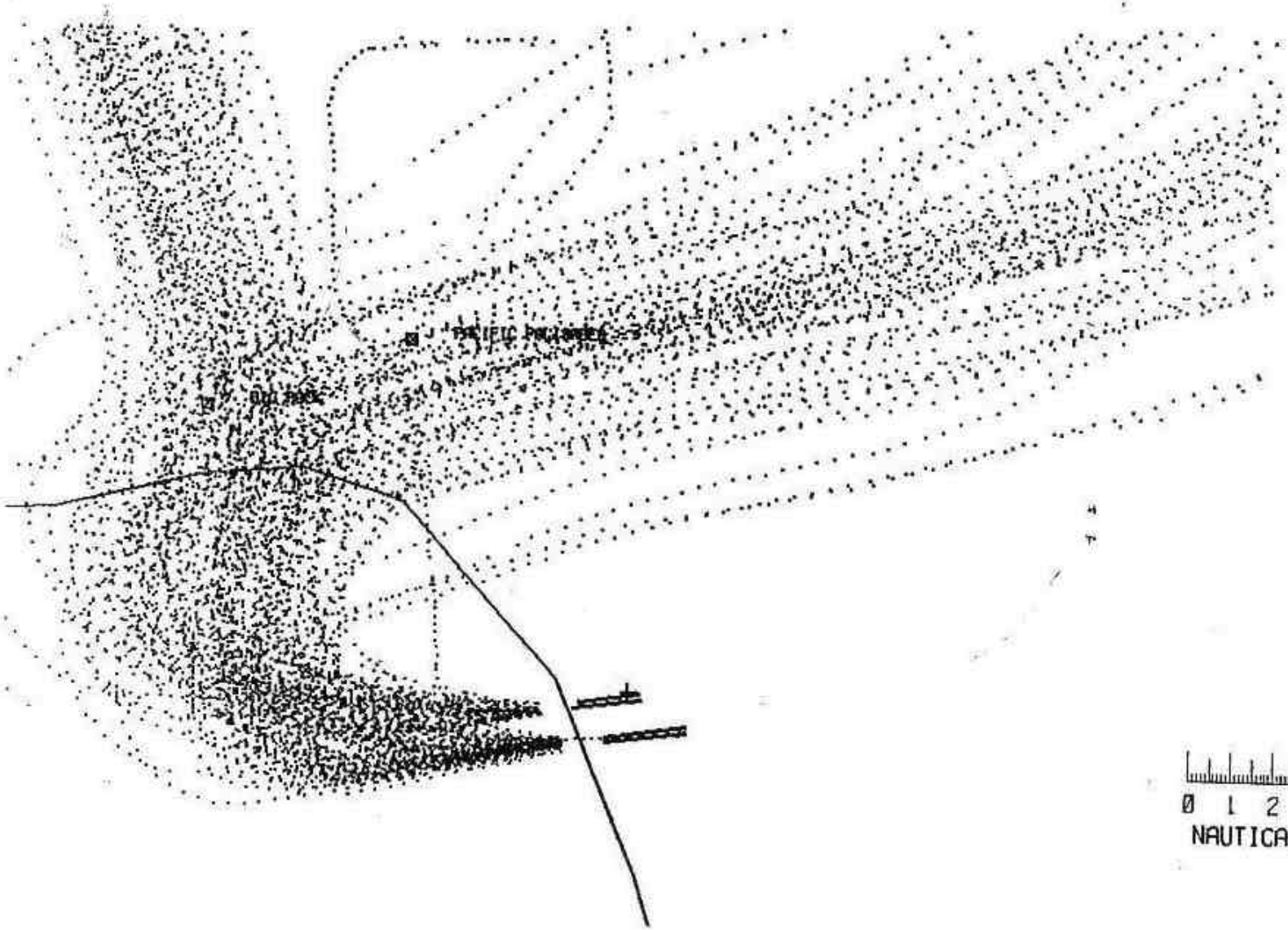
- Tracks of departure routes were obtained from data extracted from Los Angeles TRACON ARTS III magnetic tapes for February 18, 1977.
- Illustrates closest distance the aircraft came to the reference point.
- The tracks for south departures going over the Palos Verdes area utilize a reference point which is one mile east of LAX and 9 miles south (Redondo Beach).
- The tracks for north departures utilize reference points 5 miles northwest and 13 miles west-northwest of LAX (Santa Monica and Malibu).

Before the Loop
(Flight Patterns as of February 18, 1977)

Northeast bound jet departures

- Turned right
- Crossed shoreline between Topanga Canyon and Santa Monica
- Approximate altitude 6,000 feet

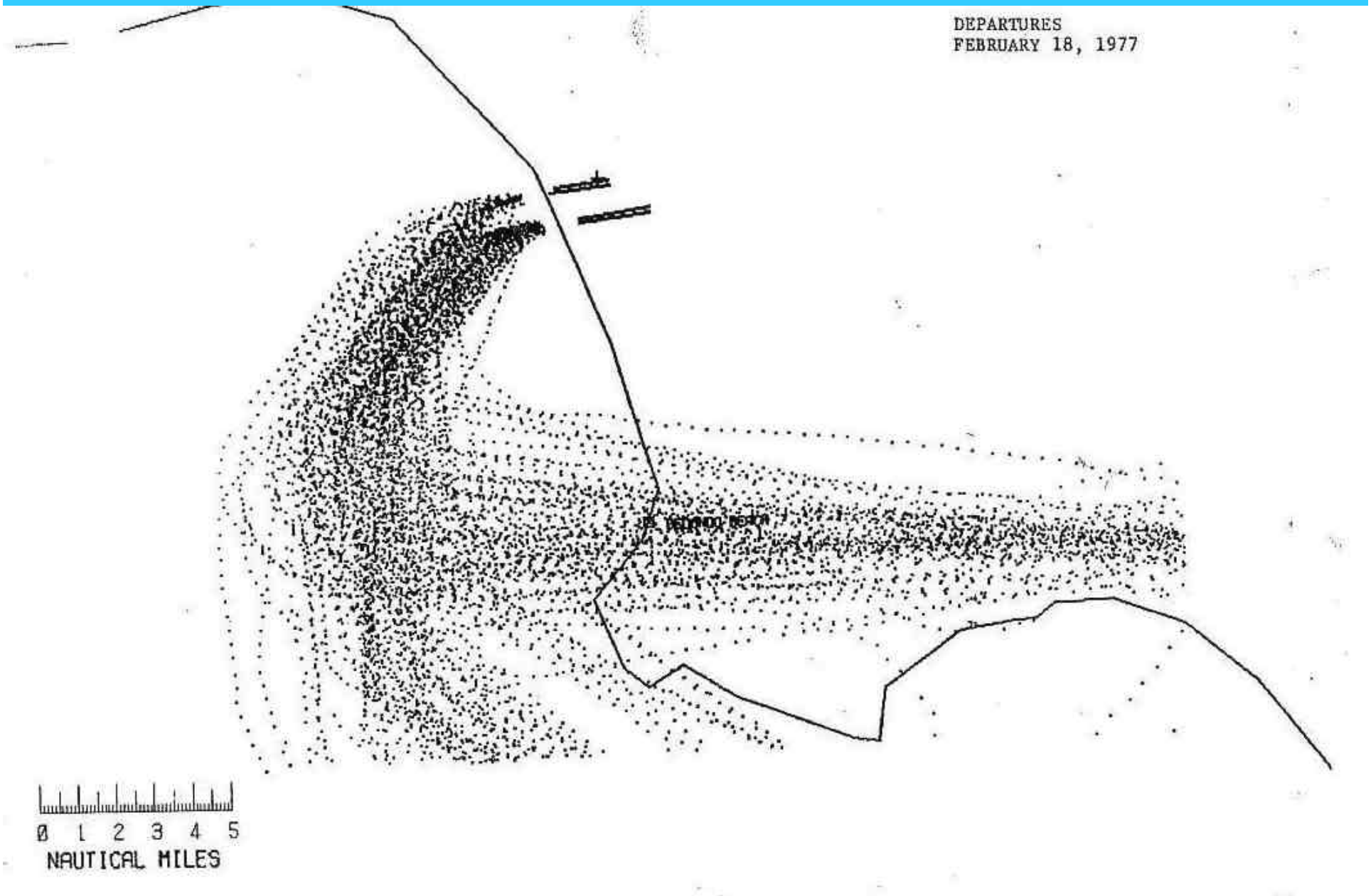
DEPARTURES
FEBRUARY 18, 1977



Before the Loop
(Flight Patterns as of February 18, 1977)

Eastbound jet departures from LAX

- Turned left
- Crossed the shoreline in the vicinity of Redondo Beach
- Then crossed Palos Verdes peninsula at approximately 6,000 to 7,000 feet


DEPARTURES
FEBRUARY 18, 1977
0 1 2 3 4 5
NAUTICAL MILES

Study and Testing of Loop Departure Procedures

- Tested alternatives (2/77 and 3/77)
- Only jets were included in the test
- Published Results on July 1, 1977 for public comment
- Implemented Revised Departure Procedures in February 1978

Environmental Requirements for Loop Departure Procedures

In 1978, the governing policy was contained in FAA Order 1050.1B (dated June 16, 1977), Appendix 3, Paragraphs 4a and 5f, which classified operations at or above 3000' as "Excepted Action" (now referred to as a Categorical Exclusion). Because the Loop Departure did not change flight paths below 3000', there was no requirement for an Environmental Assessment (EA), or an Environmental Impact Statement (EIS).

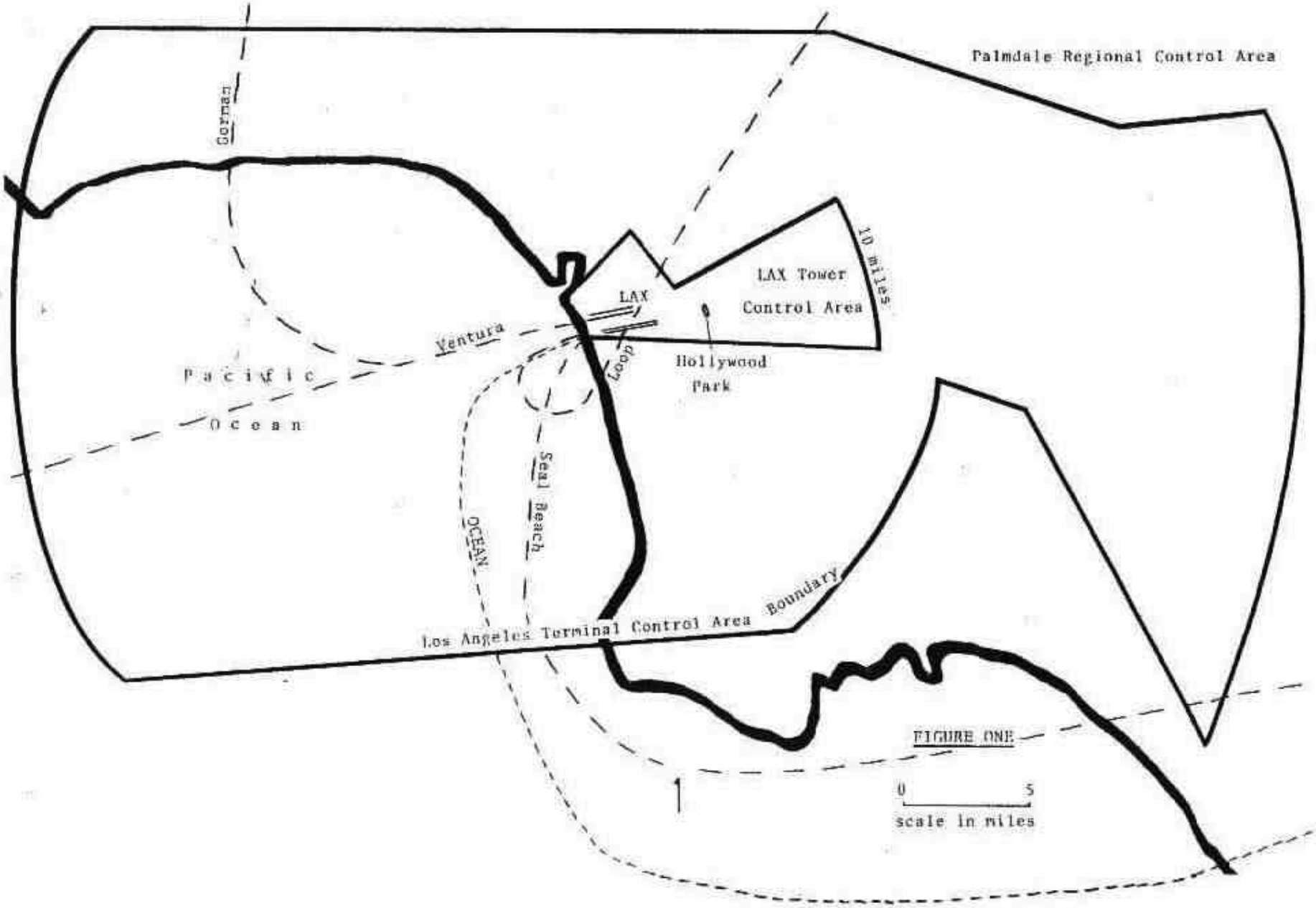
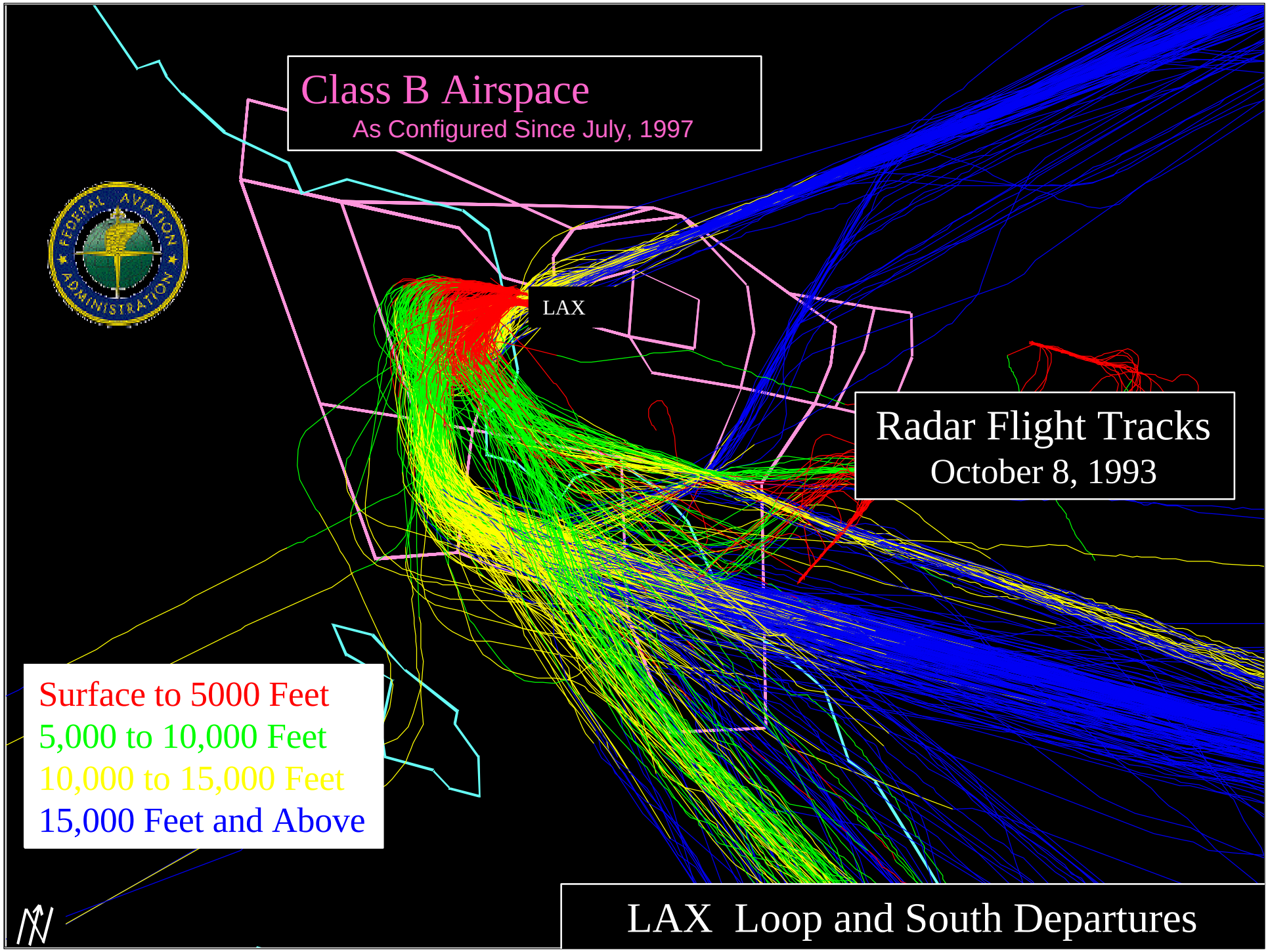

Palmdale Regional Control Area
Gorman
10 miles
LAX Tower
Control Area
LAX
Ventura
Loop
Hollywood
Park
Pacific
Ocean
Seal Beach
OCEAN
Boundary
Los Angeles Terminal Control Area
0
5
scale in miles

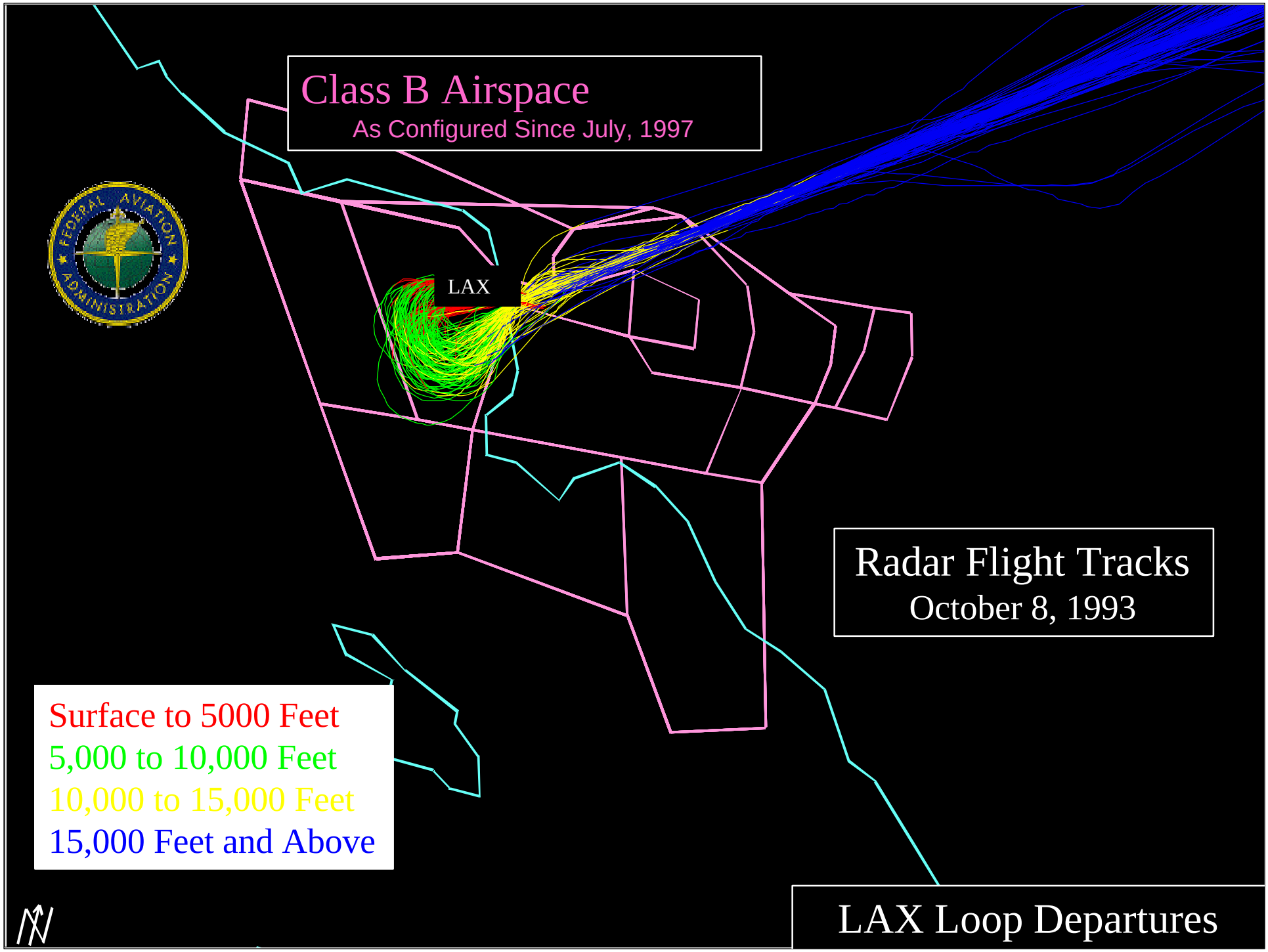
FIGURE ONE

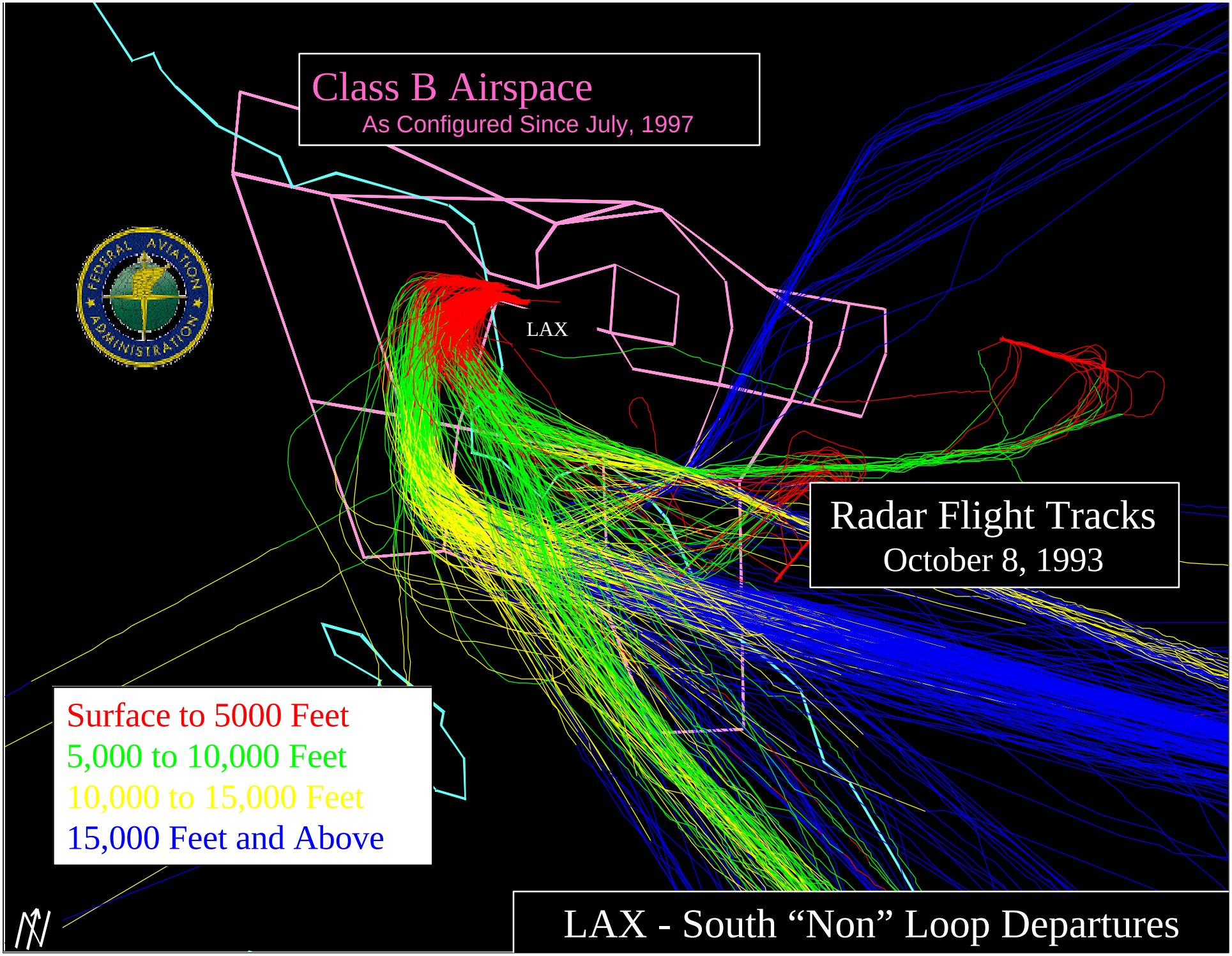
Loop Comparison

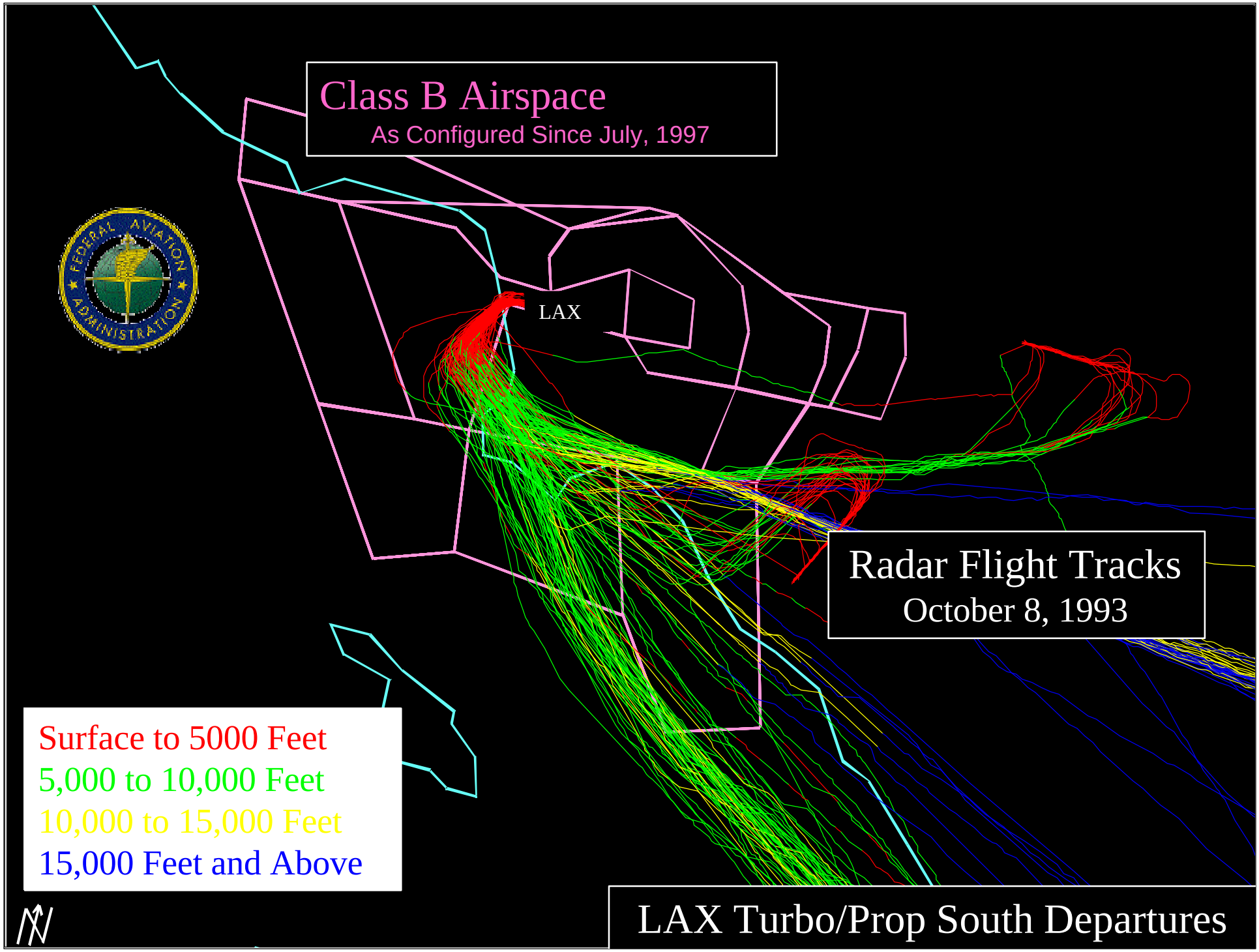
- Data compiled from 1993 to present

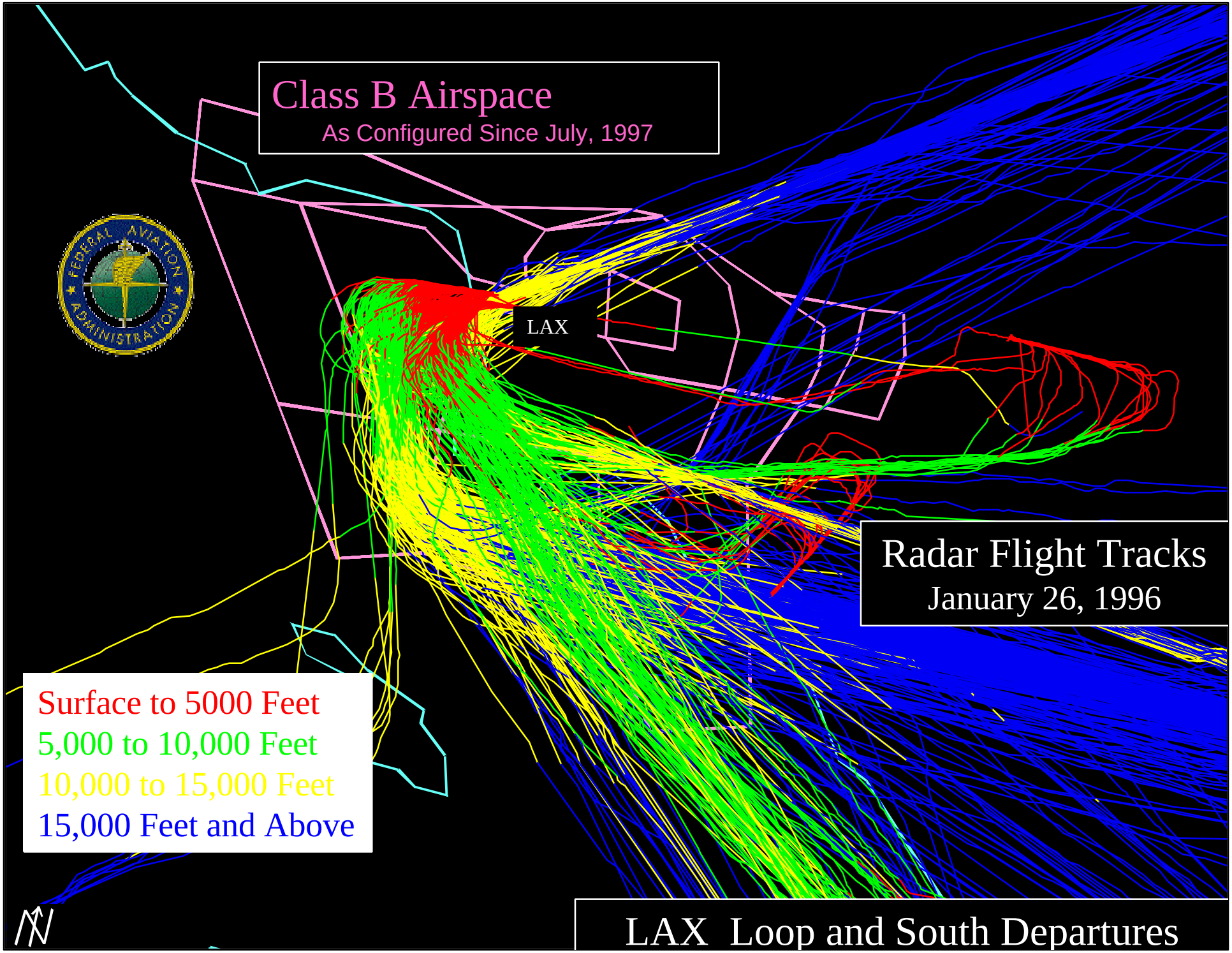
NOTE: For comparison, Loop track slides depict the current Class B configuration for all dates. Class B changes are illustrated later in the presentation.

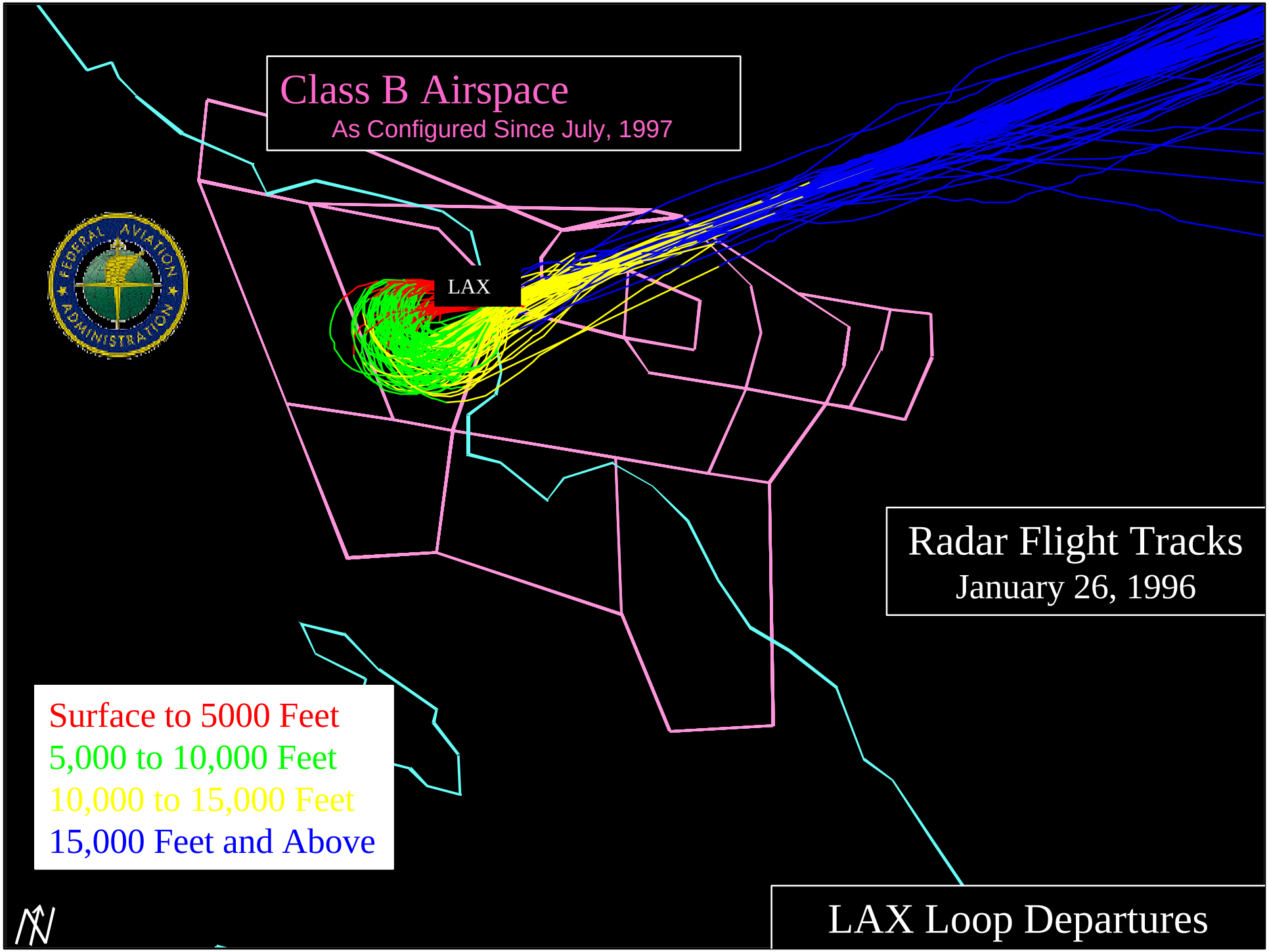

Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
October 8, 1993
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX Loop and South Departures

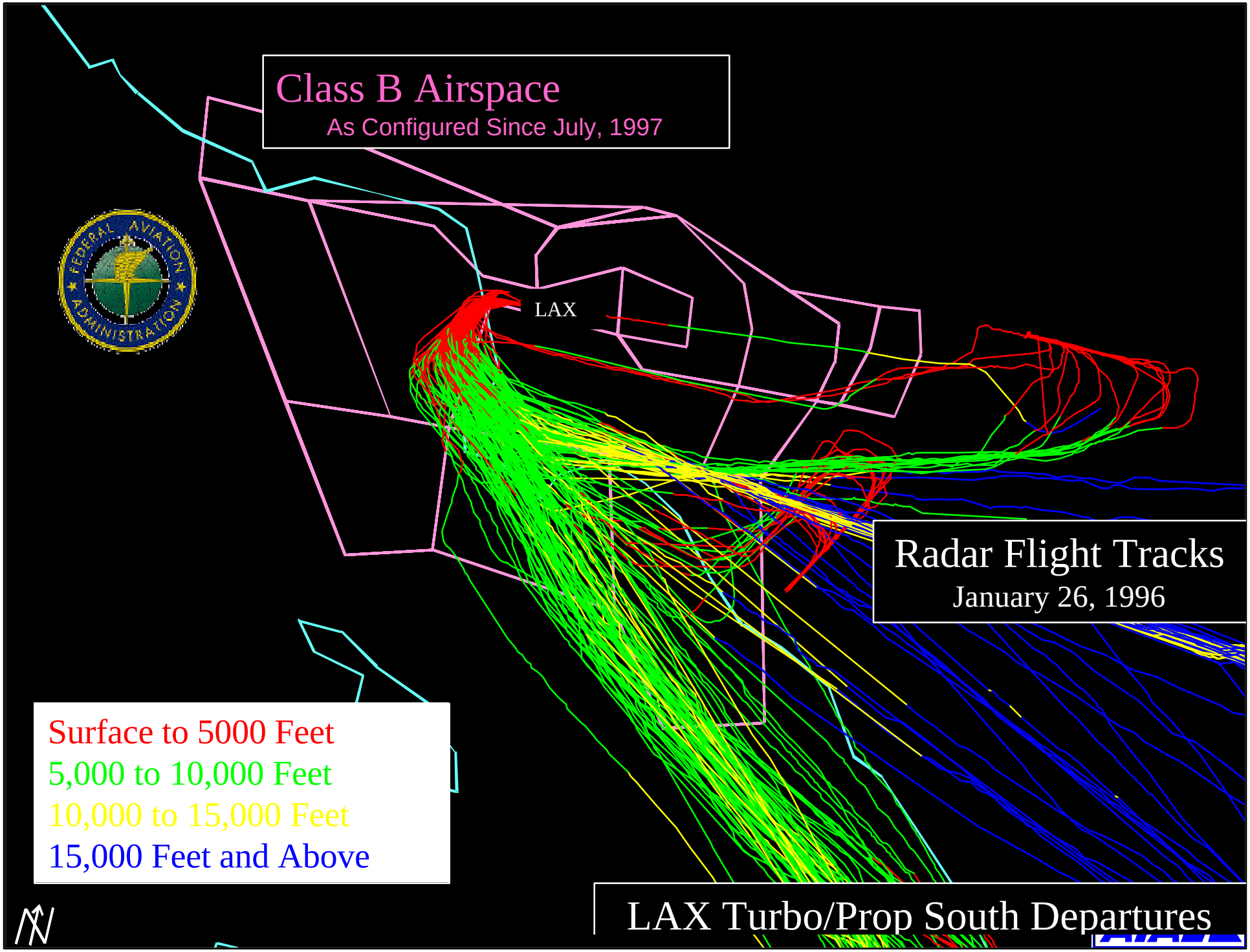

Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
October 8, 1993
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX Loop Departures

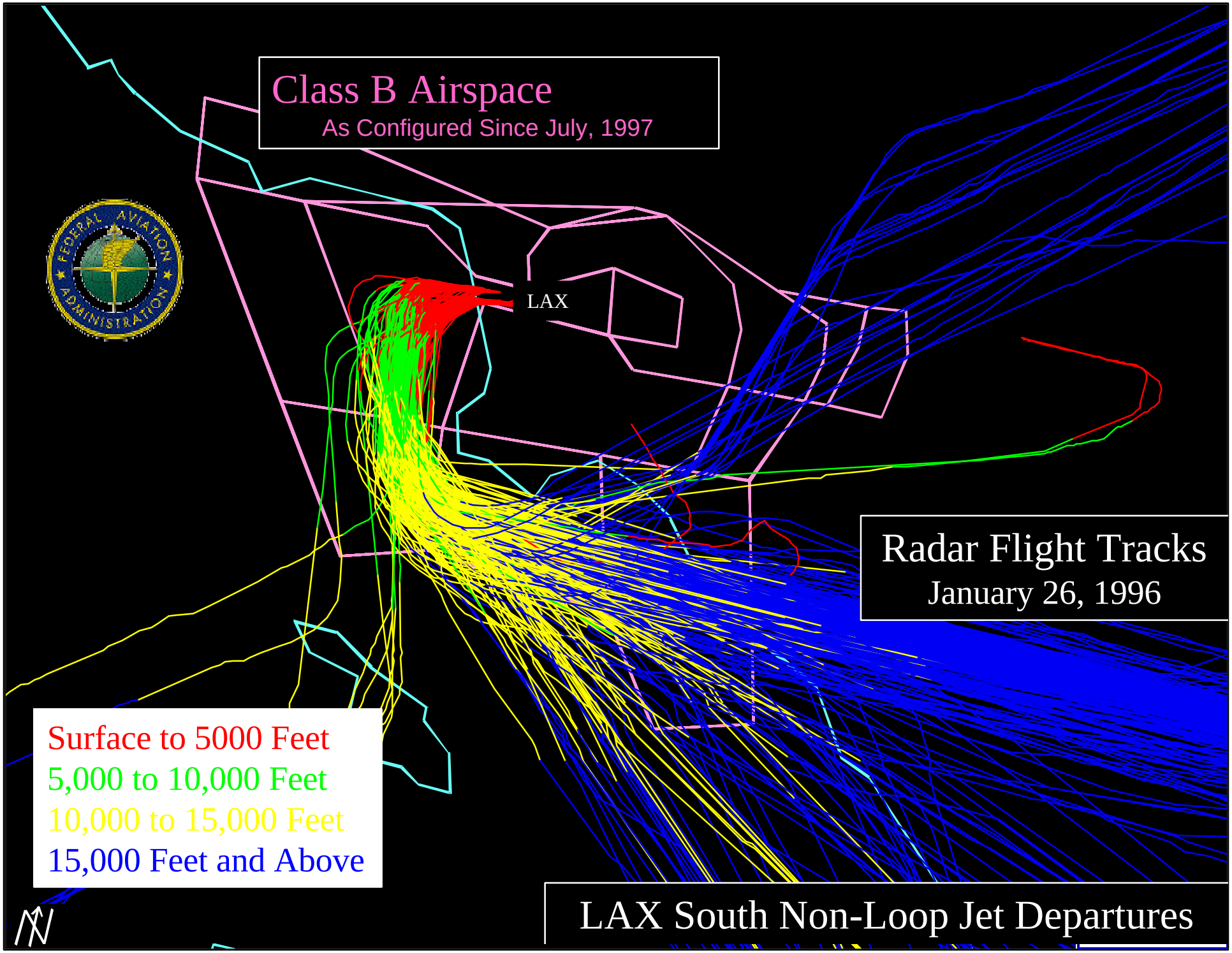

Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
October 8, 1993
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX - South "Non" Loop Departures

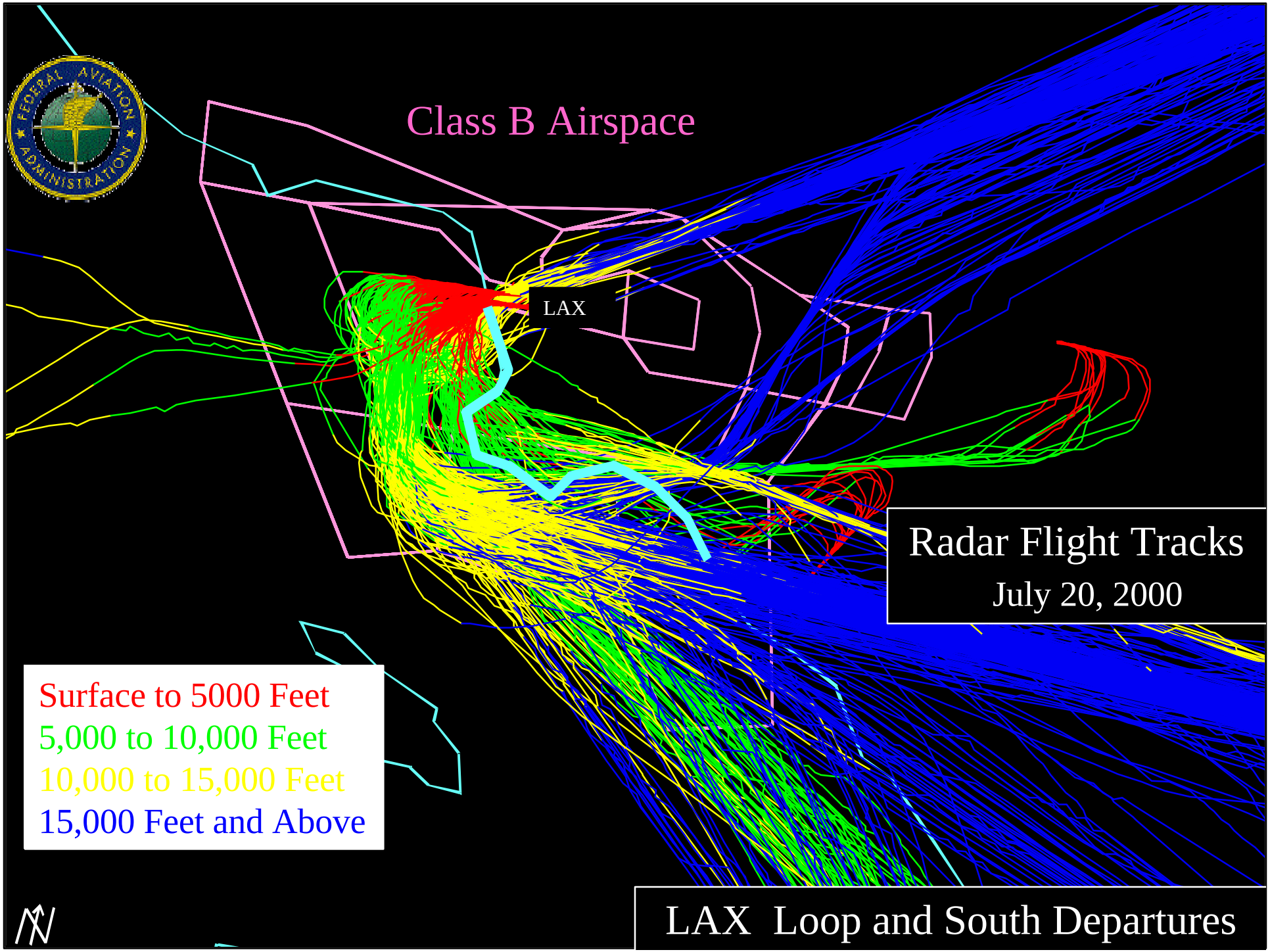

Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
October 8, 1993
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX Turbo/Prop South Departures

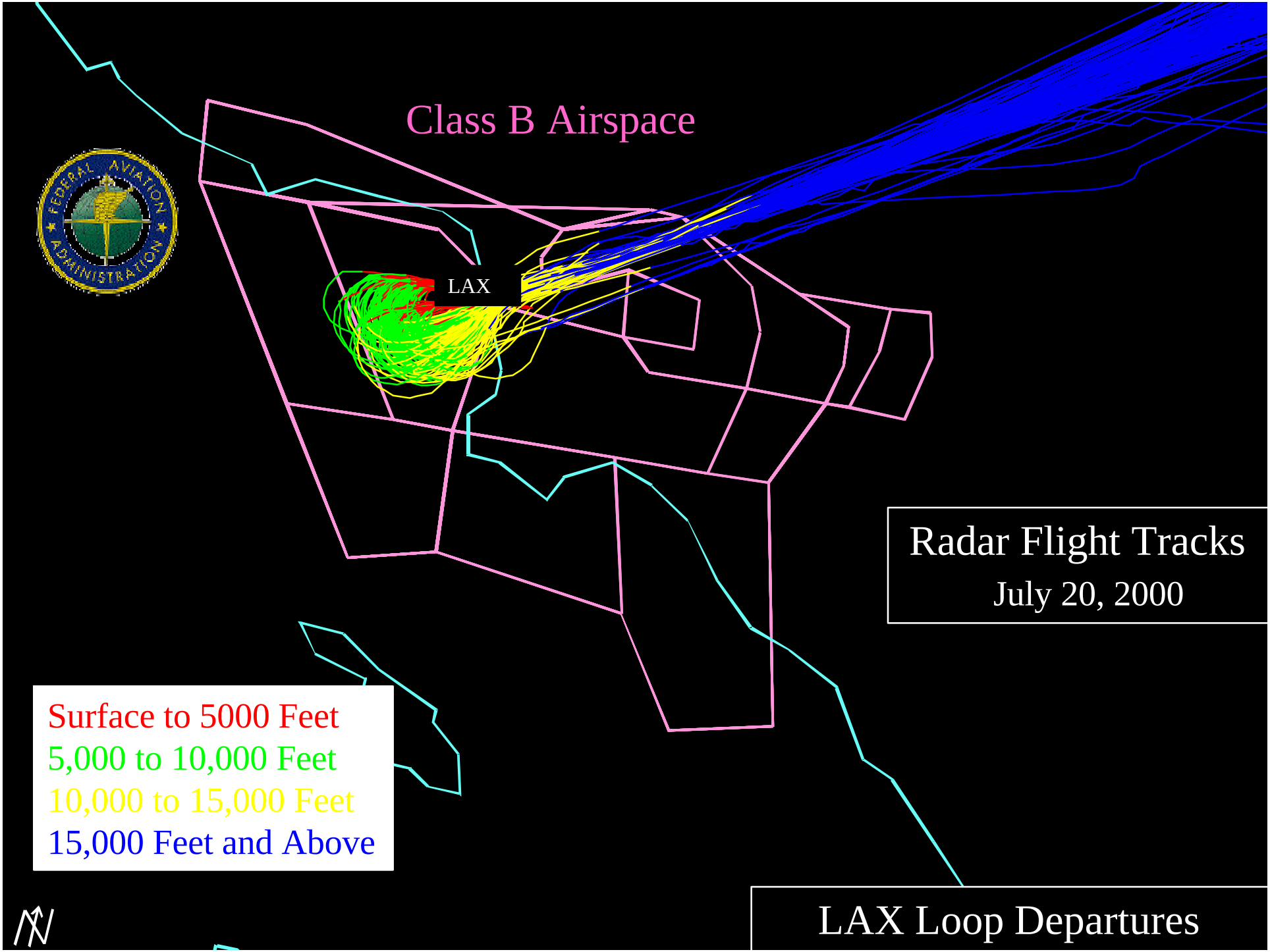

Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
January 26, 1996
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
N
LAX Loop and South Departures

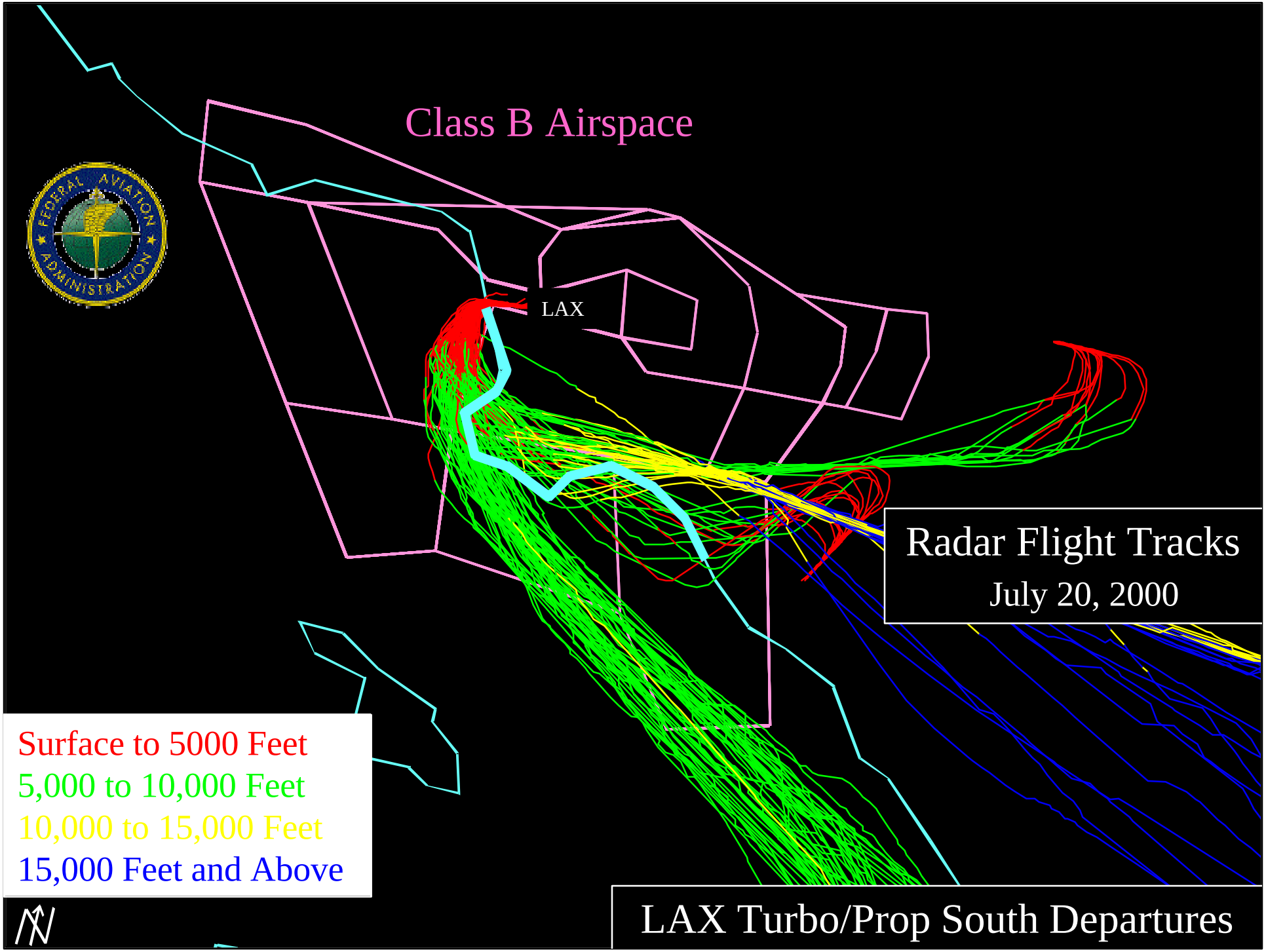

Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
January 26, 1996
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX Loop Departures

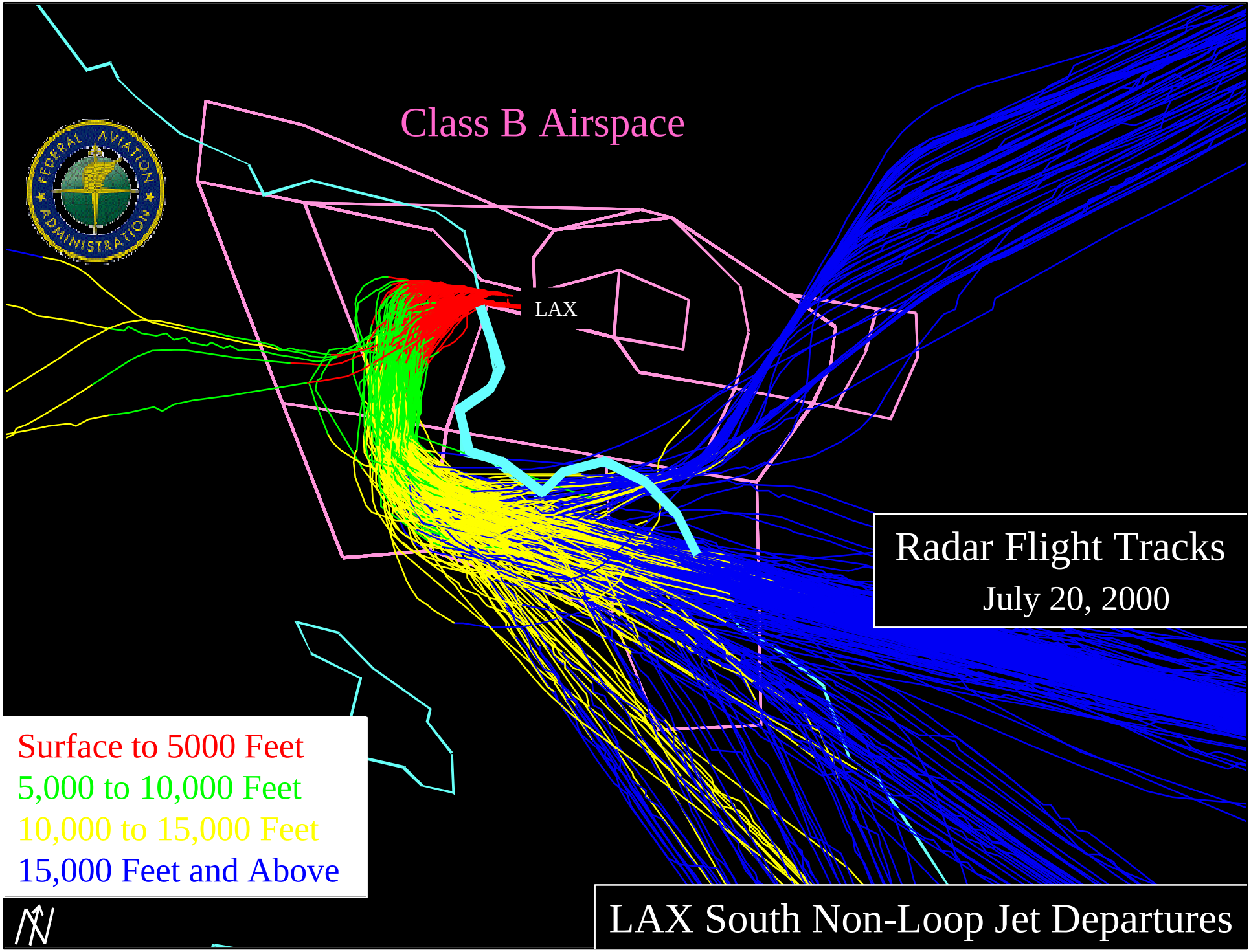

Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
January 26, 1996
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX Turbo/Prop South Departures


Class B Airspace
As Configured Since July, 1997
LAX
Radar Flight Tracks
January 26, 1996
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX South Non-Loop Jet Departures


Class B Airspace
LAX
Radar Flight Tracks
July 20, 2000
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX Loop and South Departures


Class B Airspace
LAX
Radar Flight Tracks
July 20, 2000
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
LAX Loop Departures


Class B Airspace
LAX
Radar Flight Tracks
July 20, 2000
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
N
LAX Turbo/Prop South Departures


Class B Airspace
LAX
Radar Flight Tracks
July 20, 2000
Surface to 5000 Feet
5,000 to 10,000 Feet
10,000 to 15,000 Feet
15,000 Feet and Above
N
LAX South Non-Loop Jet Departures

NUMBER OF LAX TURBO/PROP DEPARTURES BY AIRCRAFT MODEL AND YEAR

MODEL	YEAR 1993	1996	2000
Jetstream (BA31)	45	19	
Super Jetstream (BA32)		47	
King Air (BE02)	28	14	
Cessna (C208)	2	4	
Cessna (C425)	1		
Convair (CV34)	1		
Brasilia (E120)	21	47	73
Saab (SF34)	4	12	31
Merlin 3 (SW3)	38	20	1
Casa Aviocar (CA21)	1		
Navajo (PA31)	1		

	YEAR 1993	1996	2000
TOTAL	142	163	105

Figures represent 1-day samples from each slide date

NUMBER OF LAX LOOP DEPARTURES BY AIRCRAFT MODEL AND YEAR

MODEL	YEAR 1993	1996	2000
A300	1		
A319			7
A320			17
A330			1
B727	11	7	
B72Q			5
B733			31
B735			6
B737	5	3	6
B738			3
B73F	4		
B73J		8	
B73Q			3
B73S	40	42	
B744			6
B747	3	1	
B74F	1	2	
B752			40
B757	8	17	
B762			24
B763			10
B767	12	6	
B772			5

MODEL	YEAR 1993	1996	2000
BA46		3	
C650		1	
CL64			1
DC10	12	5	3
DC8	2	1	
DC9		1	
DC9Q			2
EA32	5	5	
G3		2	
G4		1	
GLF2			1
GLF4			1
H25B			1
HS25	2		
L101	5	3	1
LR25	1	1	
MD11	1	2	
MD80	4		20
MD82		2	
MD83	1		
MD87		1	
MD88	1		
SBR1			1

Figures represent 1-day samples from each slide date

	YEAR 1993	1996	2000
TOTAL	119	114	195

NUMBER OF LAX NON-LO0P SOUTH DEPARTURES BY AIRCRAFT MODEL AND YEAR

MODEL	YEAR 1993	YEAR 1996	YEAR 2000	MODEL	YEAR 1993	YEAR 1996	YEAR 2000	MODEL	YEAR 1993	YEAR 1996	YEAR 2000
A300	3	2		B74F	10	9		DC9	4	6	11
A30B			2	B74S	1			DC9Q			3
A310		2		B752			73	EA30	5	2	
A319			15	B757	53	56		EA31		1	
A320	9	4	35	B762			12	EA32	5	22	
A340			1	B763			16	F100			4
B722			8	B767	24	34		G2	1	1	
B727	26	26		B772			2	G4		2	
B72Q			9	BA46		1		H25B			1
B733			53	C21		1		HS25		1	
B734			1	C501	1			L101	7	9	5
B735			10	C525			1	L29B			1
B737	22	6	18	CL60	2			LR31		1	
B738			8	DA01	1			LR35	1	1	
B73F	5	1		DA05	1			MD11	3	4	3
B73J		7		DA10	1			MD80	24	38	38
B73Q			2	DC10	26	25	14	MD82	4	4	
B73S	50	65		DC8	5	6		MD83	1	1	
B741			1	DC86	1			MD87		1	
B742			2	DC87	1		2	MD88	3	2	
B744			8	DC8Q			1	N265	1		
B747	7	3		DC8S	2			SBR1			1

	YEAR 1993	YEAR 1996	YEAR 2000
TOTAL	310	344	361

Figures represent 1-day samples from each slide date

LAX Noise Abatement Procedures

Dated 1975

Except in an unusual situation or specific direction of ATC:

–Pilot will Maintain runway heading until past the shoreline

–Twin engine piston/turboprop and all light (under 12,500 lbs) propeller aircraft are exempt

–ATC will initially vector turbojet and 4-engine turboprop aircraft only in an area bounded by bearings westward from the shoreline of 210° and 270°

Note: This has not changed

LAX Noise Abatement Procedures

–ATC will initially vector turbojet and 4-engine turboprop aircraft only in an area bounded by bearings westward from the shoreline of 210° and 270°

Headings for SIDs/DPs have always been within the ATC vector area

Los Angeles East Operations

East Runway Operations

Full East Configuration

•Required when east wind exceeds 10K (wet or dry runway)

•Opposite direction departure available anytime upon pilot request (may entail significant delay)

Over Ocean Configuration

•Depart to the west, land to the east

•Used 0000-0630 unless not operationally feasible

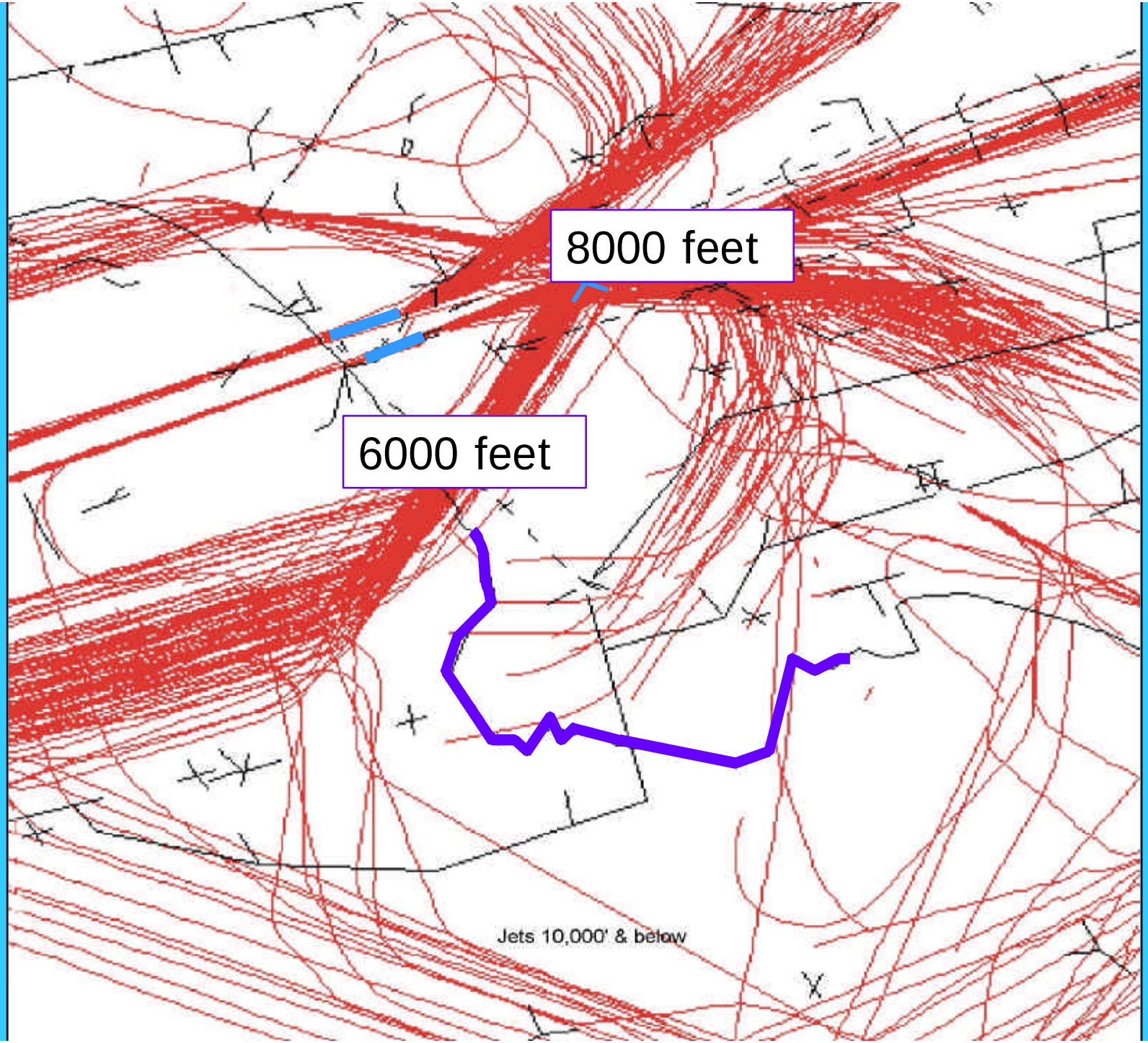
•Vector/assign headings to ensure that departures do not turn southbound (heading 210) until west of LAX VOR

East Runway Operations

Limiting Conditions

Over Ocean procedures are suspended when:

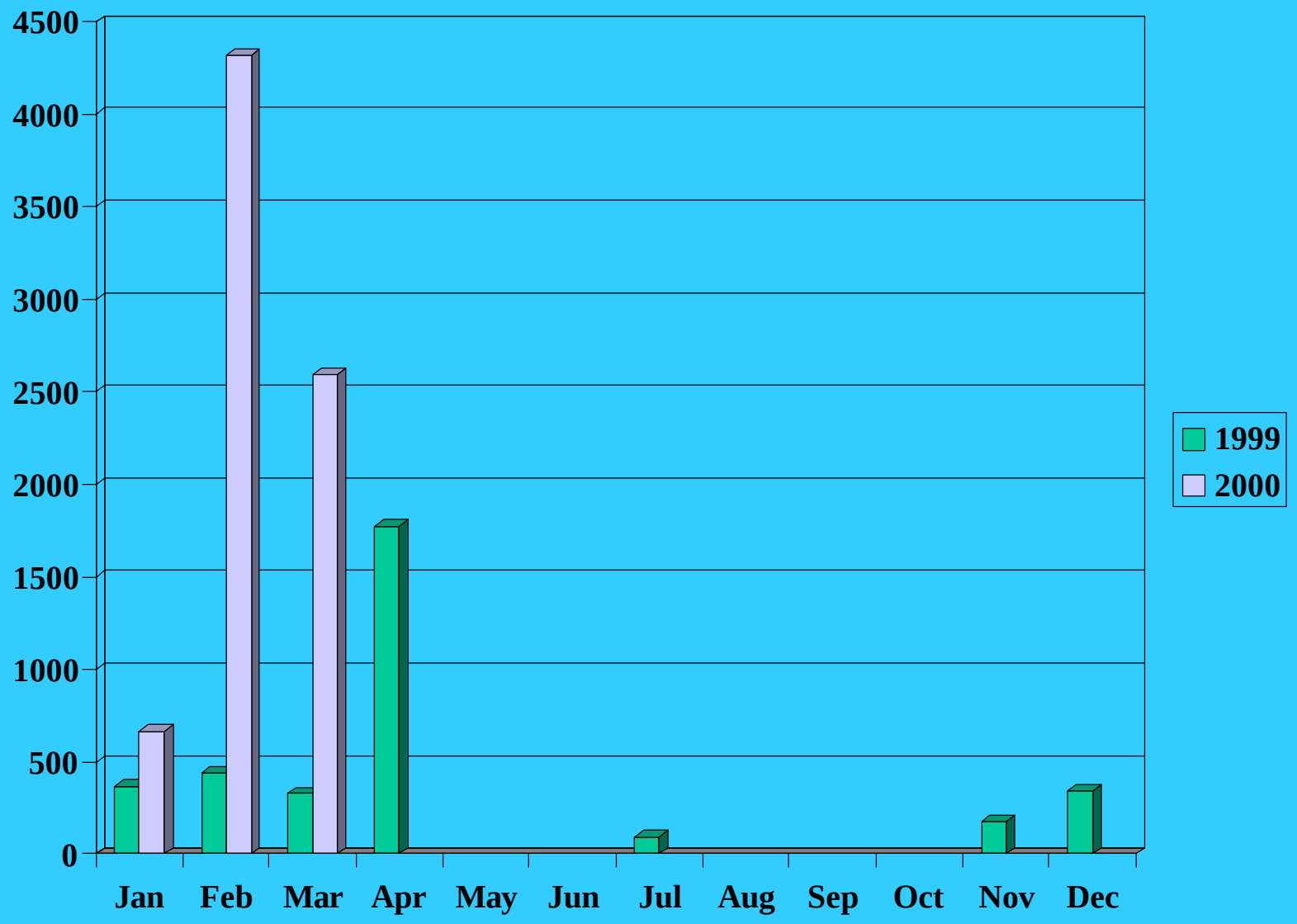
- Cloud bases at west boundary are 400 feet or less, or
- Touchdown RVR is less than 2400 feet, or
- Braking action is reported less than “good,” or
- The tailwind component exceeds 10 knots, or
- One runway complex is unavailable for arrivals or departures.


8000 feet
6000 feet
Jets 10,000' & below

Los Angeles International Airport (LAX) East Configuration

1999			JAN-MAR 2000		
Date	Times	total min	Date	Times	total min
1/26	0612-0800	108	1/18	1400-1428	28
1/30	0450-0800	190	1/25	1810-0438	638
1/31	1400-1508	68	2/3	1645-2128	283
2/5	1846-2214	208	2/13	0408-0800	232
2/12	1857-2254	231	2/14	1330-1950	380
3/15	1340-1546	126	2/19	1541-0800	979
3/25	1330-1952	202	2/20	1330-0341	851
4/2	1533-1802	149	2/21	1330-2016	406
4/11	1655-0800	905	2/21	0153-0800	367
4/12	0700-1245	345	2/23	1400-2050	410
4/12	1330-1447	77	2/27	1539-2228	409
4/23	1714-2211	297	3/3	1430-2210	460
7/15	1250-1318	28	3/5	1400-1950	350
7/16	1240-1332	52	3/6	1340-2025	405
7/17	1240-1254	14	3/8	1400-1850	290
11/8	1400-1655	175	3/8	1939-2104	85
12/3	1352-1638	166	3/20	1750-0800	840
12/22	1710-2008	178	3/31	2006-2249	163
TOTAL MINUTES		3519			7576
TOTAL DAYS		18			18

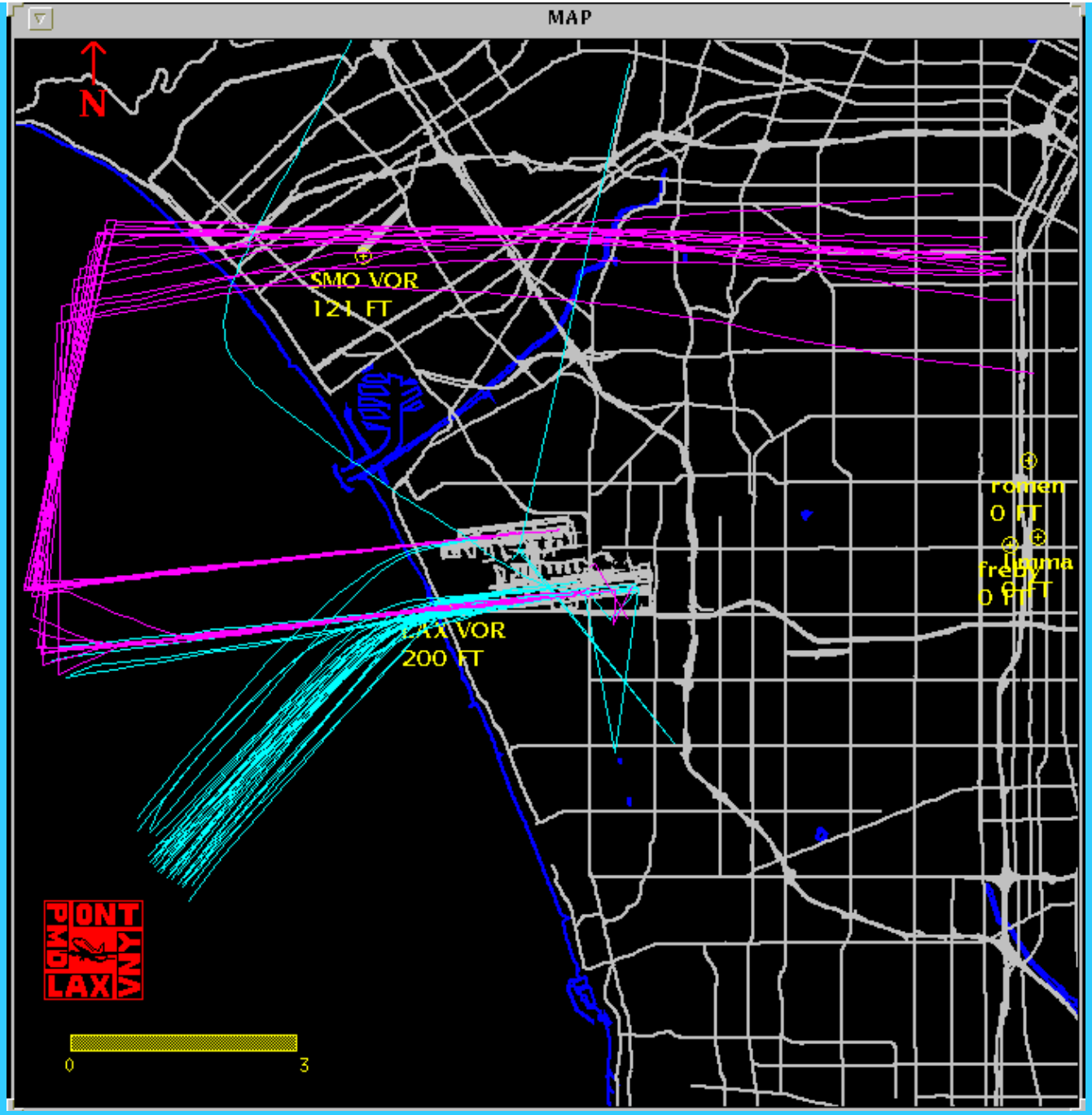
LAX East Traffic Configuration (Minutes)



Over Ocean Policies

- Over-ocean Operations (midnight to 6:30am)
- Preferential Runways
  - All landings shall be made on runways 6R and 7L between 0000 and 0630 hours, except during adverse weather conditions.
- No Turn Before Shoreline

OVER OCEAN



Note:

90 degree turn depictions due to slow sample rate. Actual turns were smooth arcs.

Los Angeles
Class B
Airspace Revision

11/22/94 - FAA released a Notice of Proposed Rulemaking to reconfigure the LAX Class B.

12/9/96 - The Federal Register published a final rule which defined the final configuration as effective 7/17/97.

Federal Register included response to received comments.

SIGNIFICANT CHANGES
Class B defined by Lat/Longs.
Three new blocks of airspace added in the South Coast area.
Top of new airspace 10,000 instead of 12,500.
4000 foot floor west of TOA lowered to the surface.
Class B Floor NW of LAX raised to 5000.
Air Traffic routes/tracks were NOT changed.

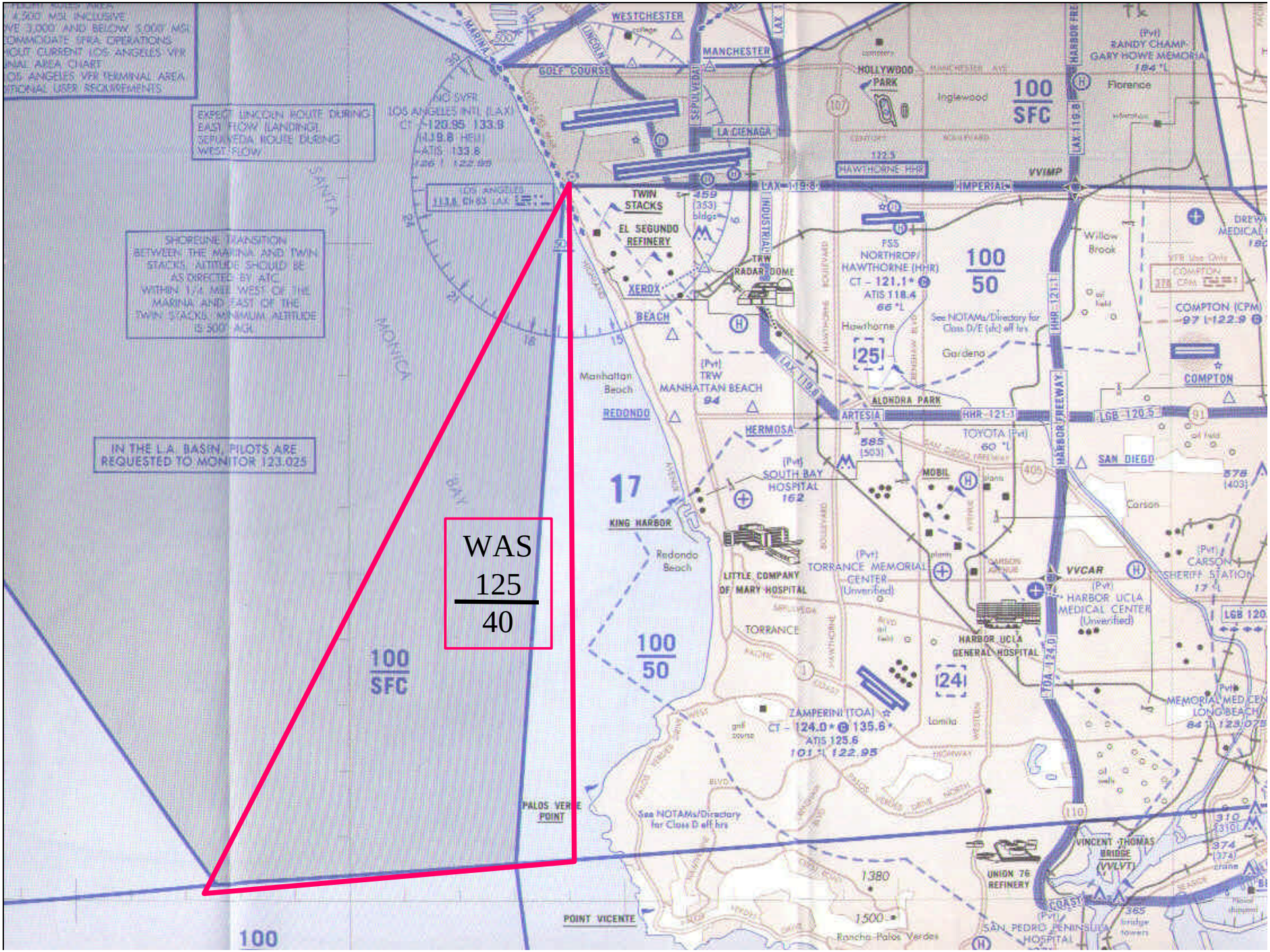
The Class B was changed to better contain the track already being flown, and to allow IFR arrivals to enter from the top instead of the side.

Another Change was to configure boundaries according to Lat/Long.

The Class B was made larger (particularly around Orange Co) but not as high.

Simplification of space was also a goal, which is the main reason the shelf off of PV disappeared (combined two chunks).

CLEARANCE REQUIRED
125
SURFACE
125
40
PALOS VERDE POINT
POINT VICENTE
THOMAS BRIDGE
SIGNAL HILL
LONG BEACH
QUEEN MARY/THE DOME
HOLLYWOOD PARK
ALONDRA PARK
MARINA DEL REY
SANTA MONICA PIER
COLISEUM
EL SEGUNDO REFINERY
HAWTHORNE
Hermosa Beach
Redondo Beach
Manhattan Beach
Playa del Rey
CONTACT SOCAL APPROACH CONTROL ON 124.9 OR 269.0
4,000 & HIGHER
3,000 & HIGHER
ATC CLEARANCE REQUIRED
Contact App Con on 134.9 or 363.2 Class B Controlled transition route HOLLYWOOD PARK ROUTE; Enter/depart Class B north/south bound on and following the VNY 140° radial. If VOR out of service proceed via VNY Hollywood Park Queen Mary/The Dome Altitude assigned by ATC.
EMMY & EVA OIL PLATFORMS
HUNTINGTON PIER
SANTA ANA CLASS C
ATTENTION
CLASS C CEILING 5400' IN SOUTHWEST QUADRANTS
NATIONAL PARK SERVICE AREAS
U.S. FOREST SERVICE AREAS
PACIFIC

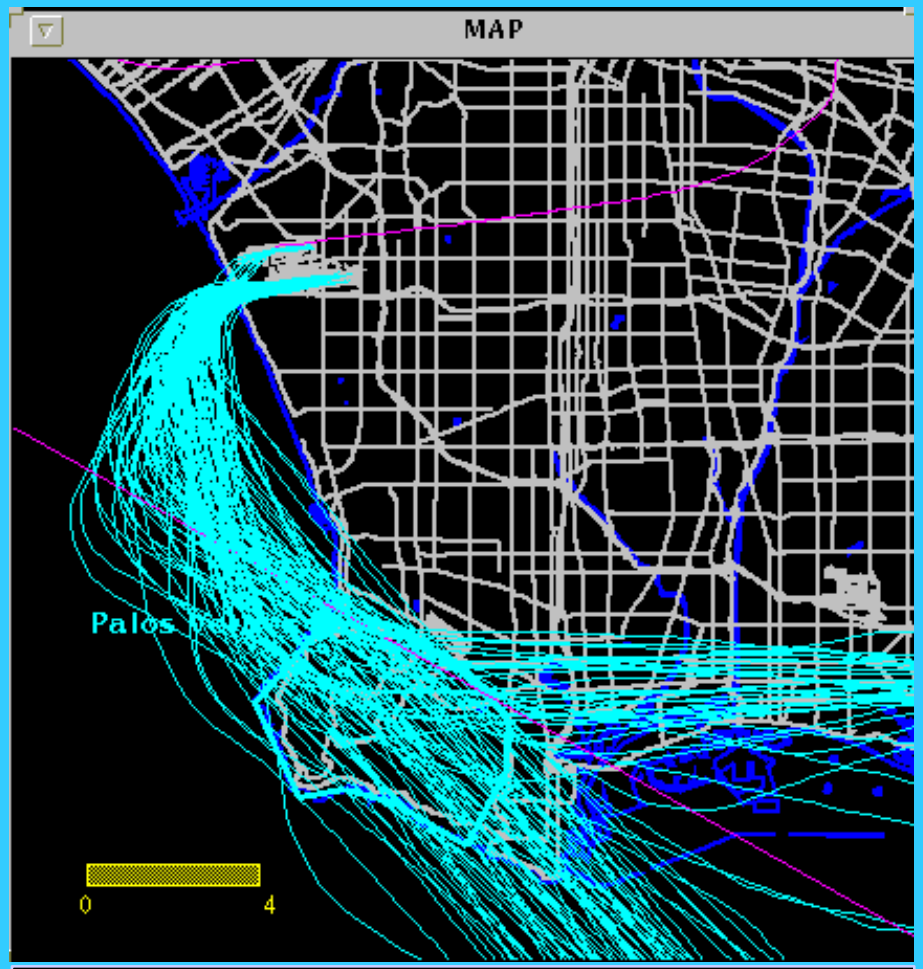

WAS
125
40
100
SFC
100
50
17
25
24
WESTCHESTER
MANCHESTER
GOLF COURSE
LA CIENAGA
HOLLYWOOD PARK
Inglewood
Florence
HAWTHORNE HHR
IMPERIAL
VVIMP
TWIN STACKS
EL SEGUNDO REFINERY
XEROX
BEACH
TRW RADAR DOME
FSS NORTHROP/ HAWTHORNE (HHR)
CT - 121.1
ATIS 118.4
Hawthorne
Gardena
Willow Brook
COMPTON (CPM)
COMPTON
Manhattan Beach
MANHATTAN BEACH
REDONDO
HERMOSA
ALONDRA PARK
ARTESIA
TOYOTA
SAN DIEGO
SOUTH BAY HOSPITAL
MOBIL
KING HARBOR
Redondo Beach
LITTLE COMPANY OF MARY HOSPITAL
TORRANCE MEMORIAL CENTER (Unverified)
VVCAR
HARBOR UCLA MEDICAL CENTER (Unverified)
HARBOR UCLA GENERAL HOSPITAL
TORRANCE
ZAMPERINI (TOA)
CT - 124.0 135.6
ATIS 125.6
Lomita
PALOS VERDE POINT
POINT VICENTE
UNION 76 REFINERY
VINCENT THOMAS BRIDGE (VVLVT)
SAN PEDRO PENINSULA HOSPITAL
Rancho Palos Verdes
SANTA MONICA BAY
IN THE L.A. BASIN, PILOTS ARE REQUESTED TO MONITOR 123.025
SHORELINE TRANSITION BETWEEN THE MARINA AND TWIN STACKS, ALTITUDE SHOULD BE AS DIRECTED BY ATC. WITHIN 1/4 MILE WEST OF THE MARINA AND EAST OF THE TWIN STACKS, MINIMUM ALTITUDE IS 500' AGL
EXPECT LINCOLN ROUTE DURING EAST FLOW (LANDING), SEPULVEDA ROUTE DURING WEST FLOW
NO SVFR LOS ANGELES INTL (LAX)
CT - 120.95 133.9
ATIS 133.8
LOS ANGELES
LAX 119.8
HHR 121.1
LGB 120.5
TOA 124.0
See NOTAMs/Directory for Class D/E (sfc) eff hrs
See NOTAMs/Directory for Class D eff hrs
(Pvt) RANDY CHAMP-GARY HOWE MEMORIAL
(Pvt) CARSON SHERIFF STATION
MEMORIAL MED CEN LONG BEACH
1380
1500

Palos Verdes
Offshore Turboprop Route

LAX flights over PV Peninsula

THEN...

- LAX Flights over PV Peninsula
- LAX flights are 62% of total overflights over Peninsula



Shows one day of prop data (4/14/98)

Palos Verdes Offshore Turboprop Route

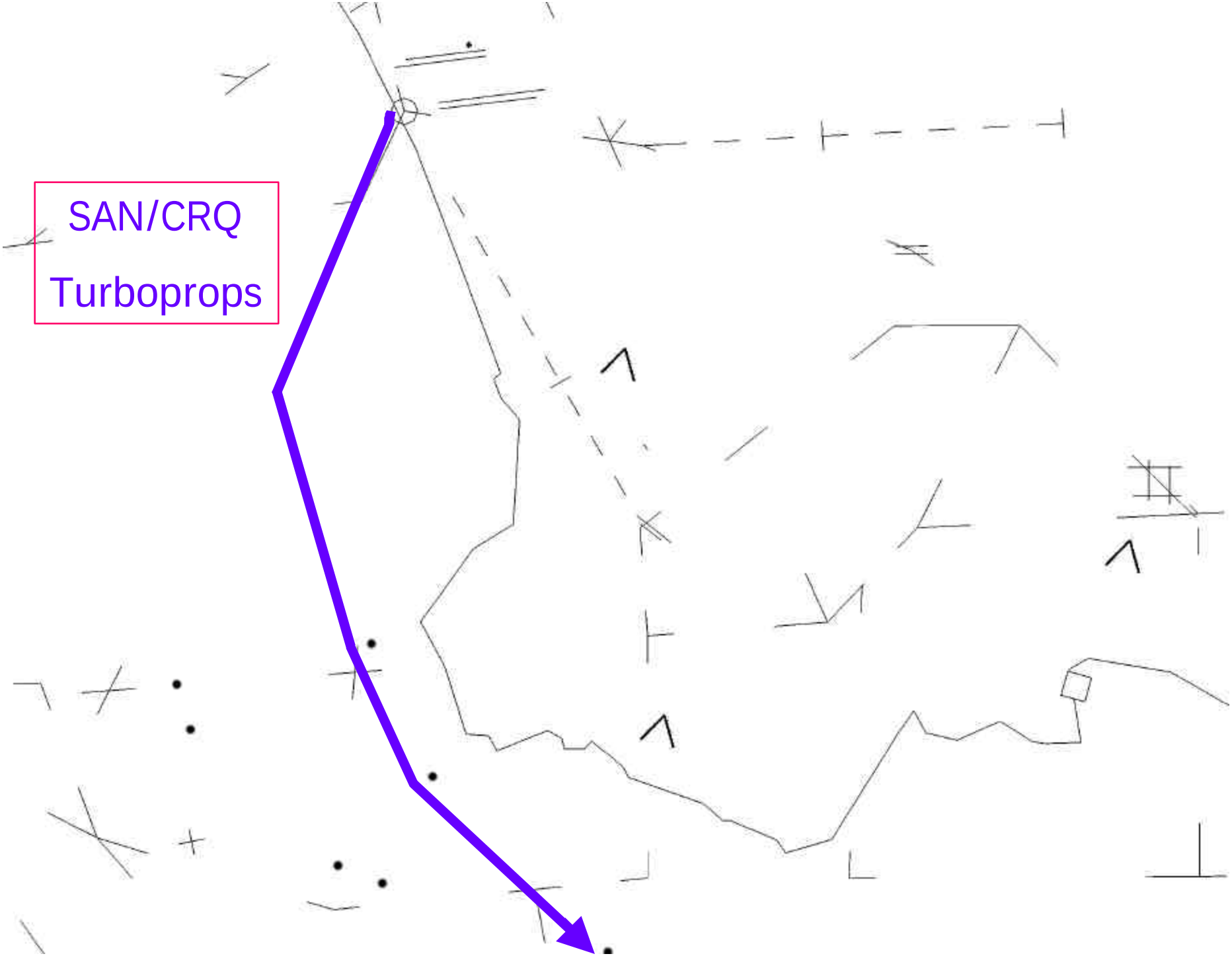
What are the differences?

Reference markings placed one-mile offshore of ARTS radar maps

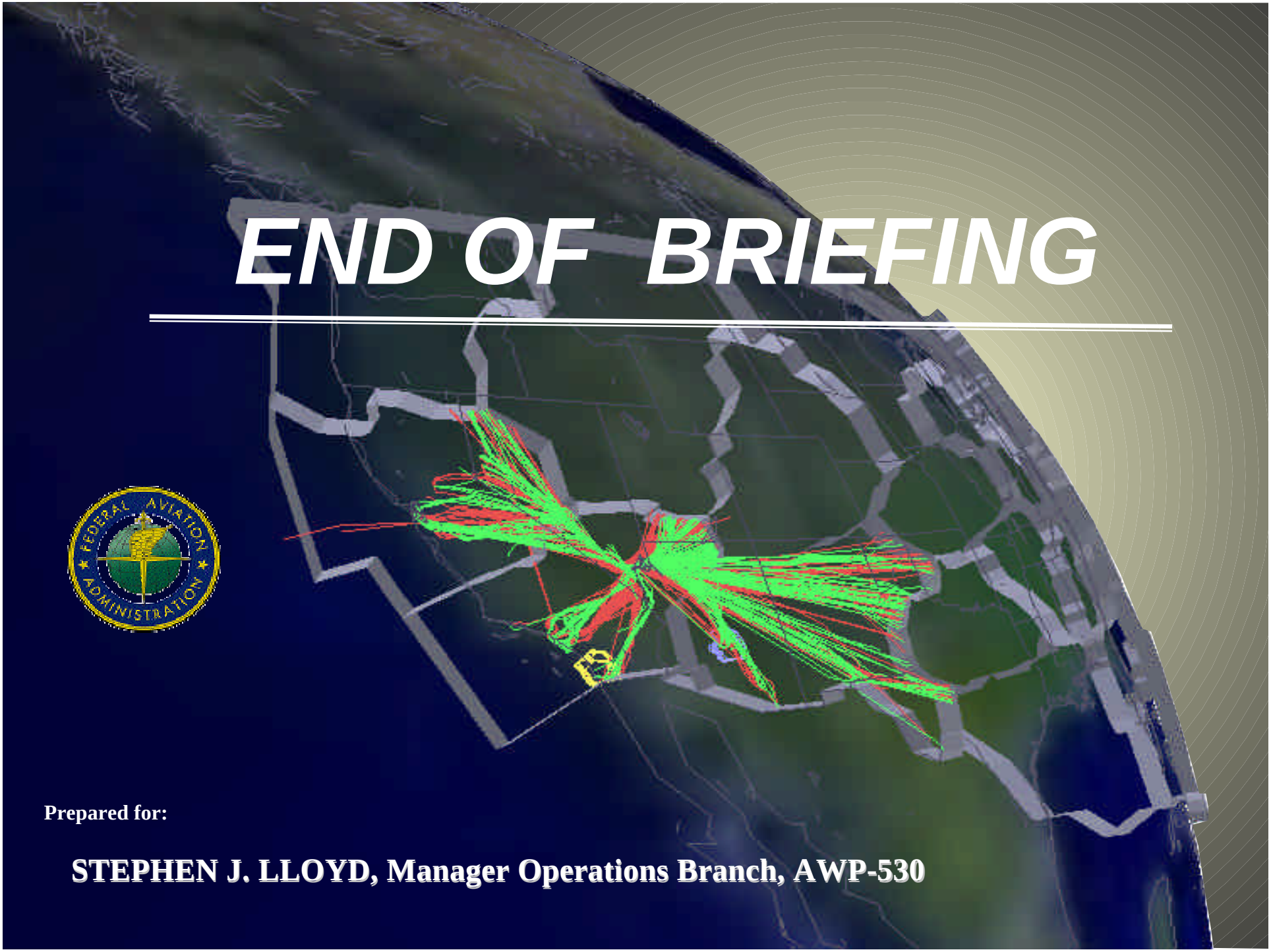
Previously, operations were right up to the shoreline

Vectoring procedure no longer voluntary

Permanent procedure


SAN/CRQ
Turboprops

END OF BRIEFING



Prepared for:

STEPHEN J. LLOYD, Manager Operations Branch, AWP-530