



ADS-B ASE Processing

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ASE Workshop
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FAA



Federal Aviation
Administration

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Next**GEN**

Service Volume and Stations

Service Volume

Station

0

Boston
Washington
New York

1

Memphis
Atlanta

2

Jacksonville
Miami
San Juan

5

Indianapolis
Cleveland

6

Chicago
Kansas City
Minneapolis



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Service Volume and Stations

Service Volume

Station

7

Albuquerque
Fort Worth
Houston
Golf of Mexico

10

Denver
Salt Lake City
Seattle

11

Los Angeles
Oakland

15

Alaska
Juneau

16

Honolulu

17

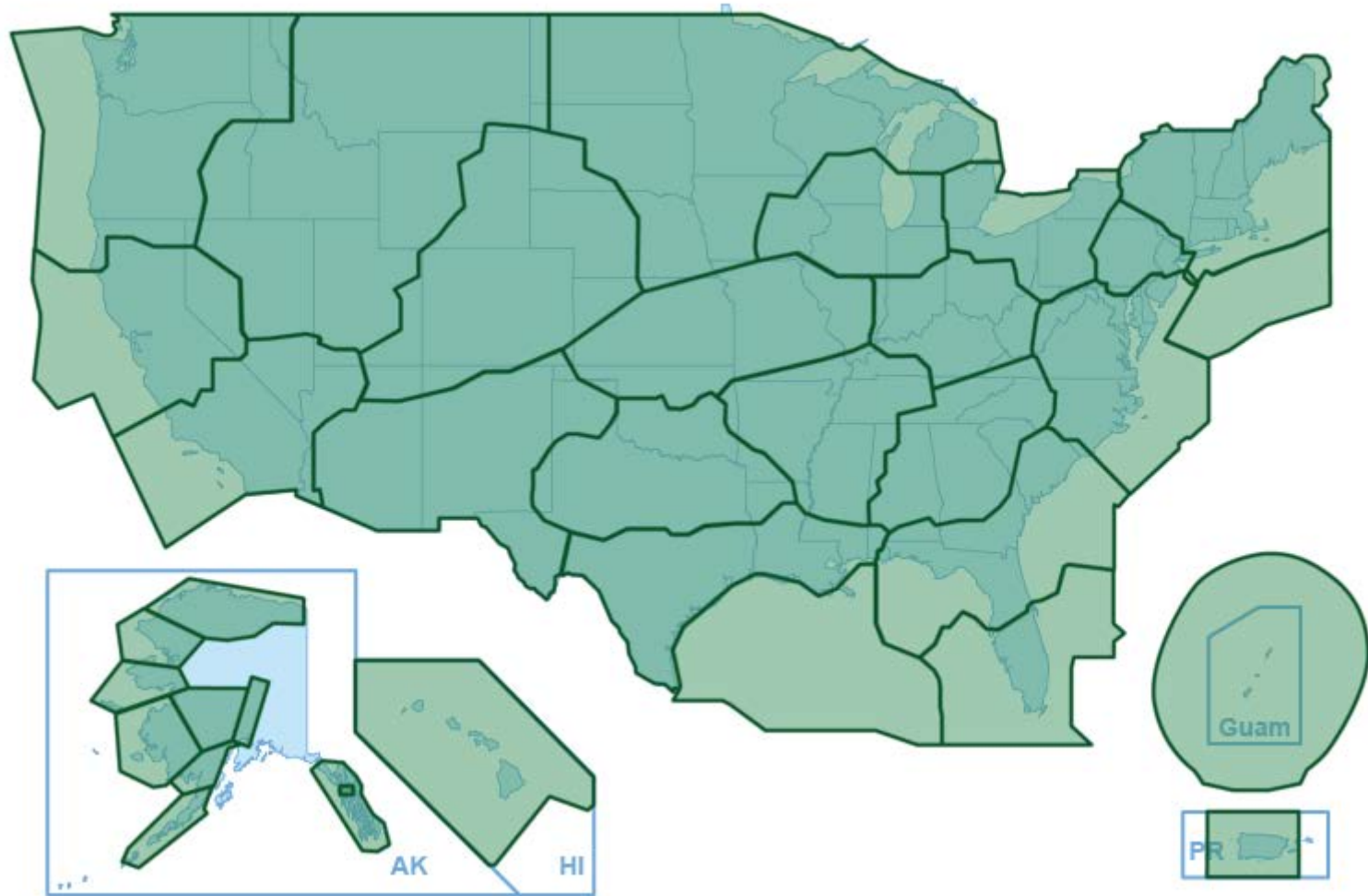
Guam



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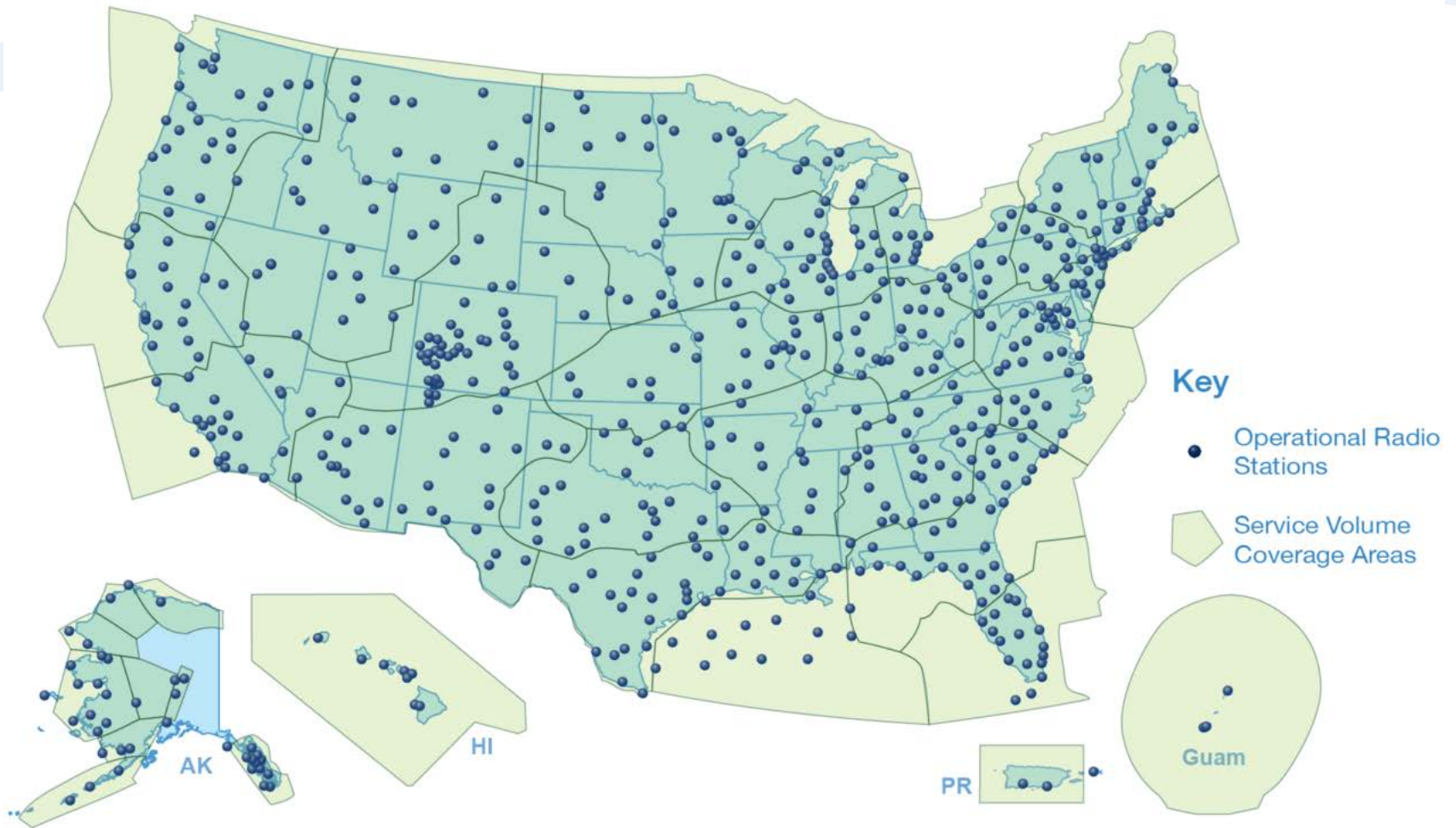
USA Coverage Map



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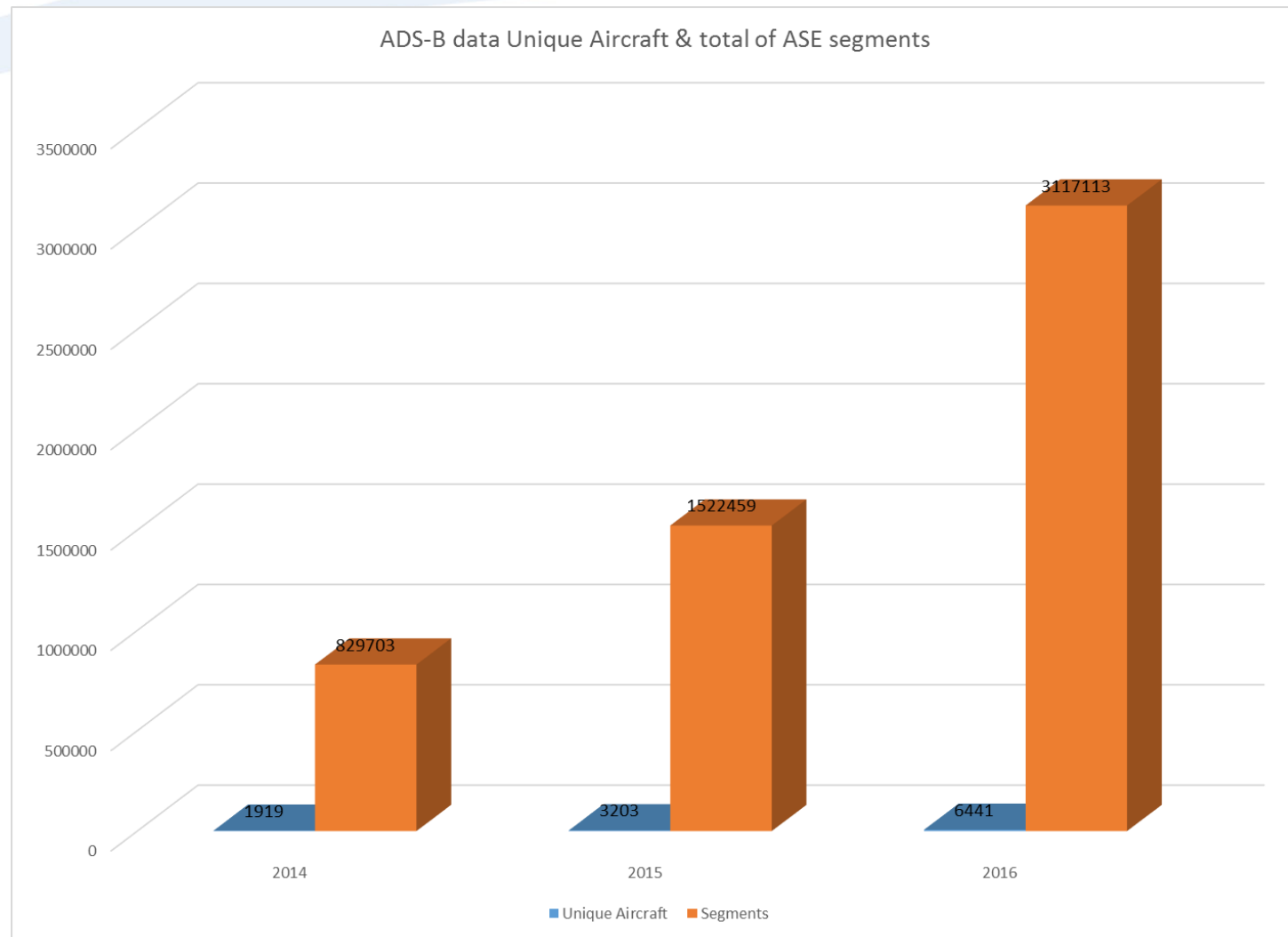
USA Operational Radio Stations



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USA Operational Radio Stations



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Data Report

❑ Quarterly Report for 2016

❑ 1st Quarter (Jan, Feb, Mar)

- ❑ 590,971 Segments with an ASE
- ❑ 3,053 Unique Aircraft

❑ 2nd Quarter (Apr, May, Jun)

- ❑ 720,547 Segments with an ASE
- ❑ 4,066 Unique Aircraft



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Data Report

☐ Quarterly Report for 2016

☐ 3rd Quarter (Jul, Aug, Sep)

- ☐ 835,824 Segments with an ASE
- ☐ 4,294 Unique Aircraft

☐ 4th Quarter (Oct, Nov, Dec)

- ☐ 969,771 Segments with an ASE
- ☐ 4,969 Unique Aircraft



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Data Report

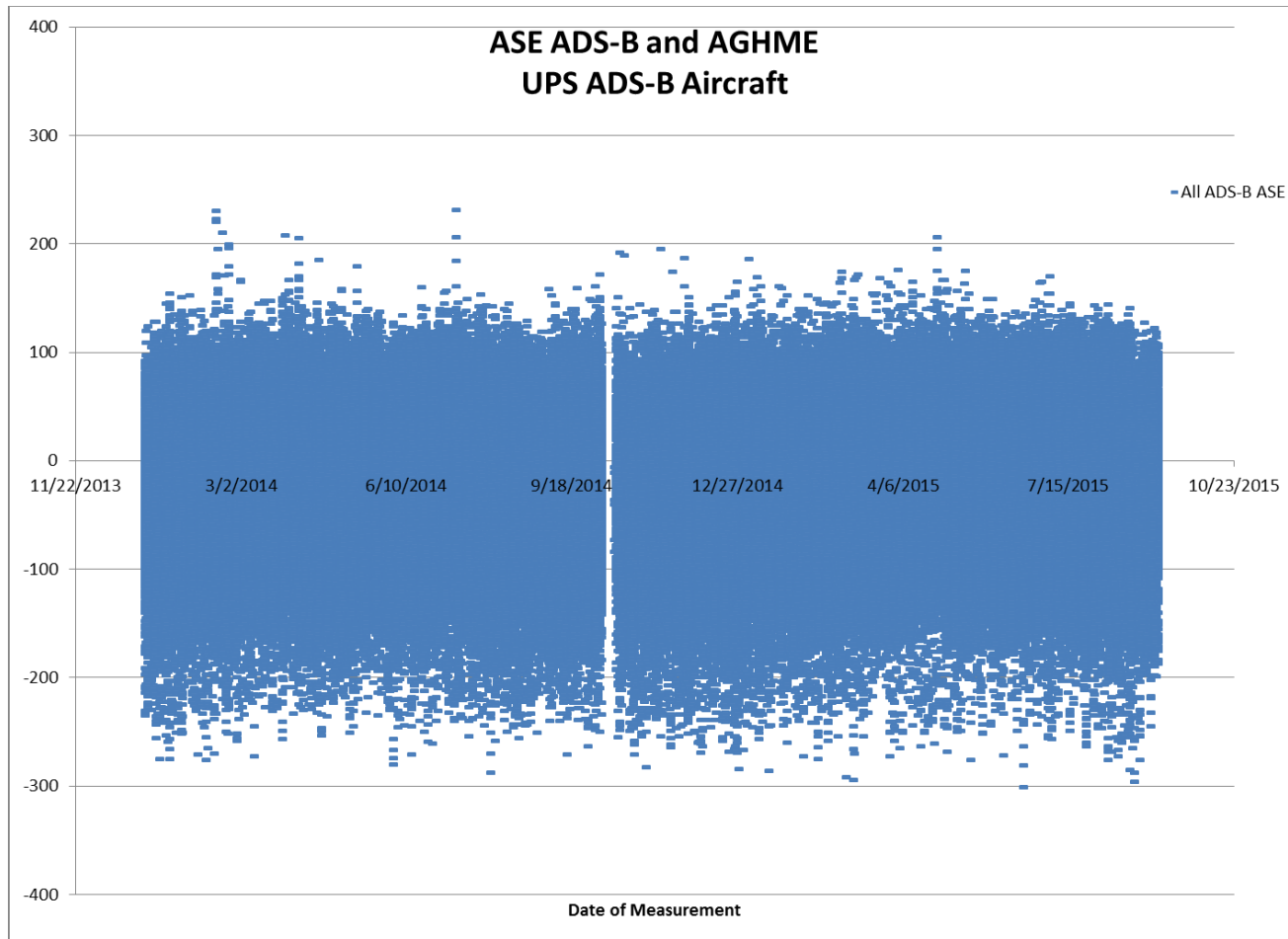
- ❑ Currently getting more than 1,000 individual Aircraft daily
- ❑ Around 350 GB of zip data per month
- ❑ The week of Jan 15 – Jan 20, 2017
 - ❑ 93,886 Segments
 - ❑ 3,157 Unique Aircraft
- ❑ The week of May 14 – May 21, 2017
 - ❑ 60,676 Segments
 - ❑ 3,138 Unique Aircraft
- ❑ The week of Sep 01 – Sep 07, 2017 *
 - ❑ 34,733 Segments
 - ❑ 2,918 Unique Aircraft



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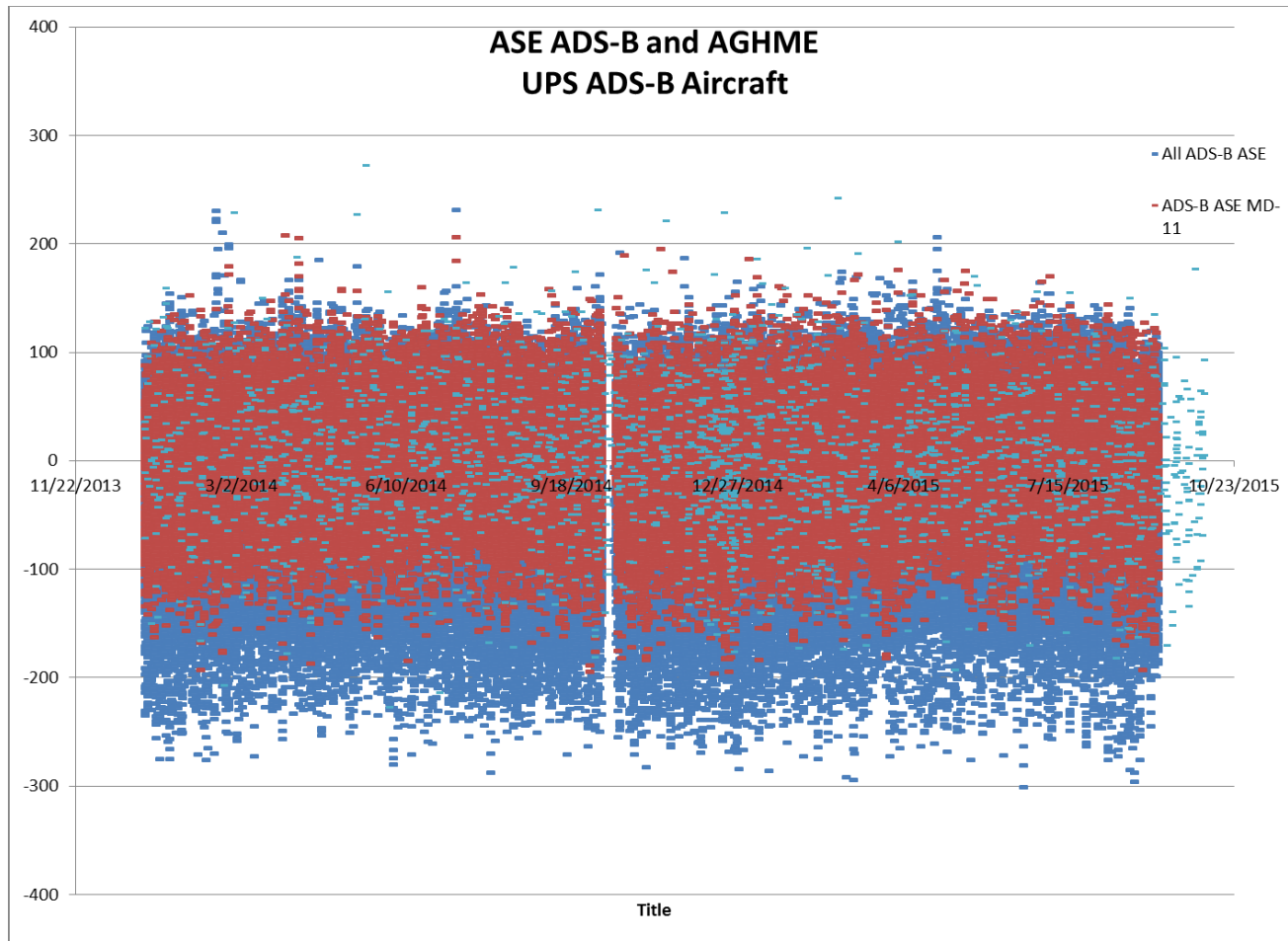
Population of ADS-B ASE Measurements



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MD-11 ASE



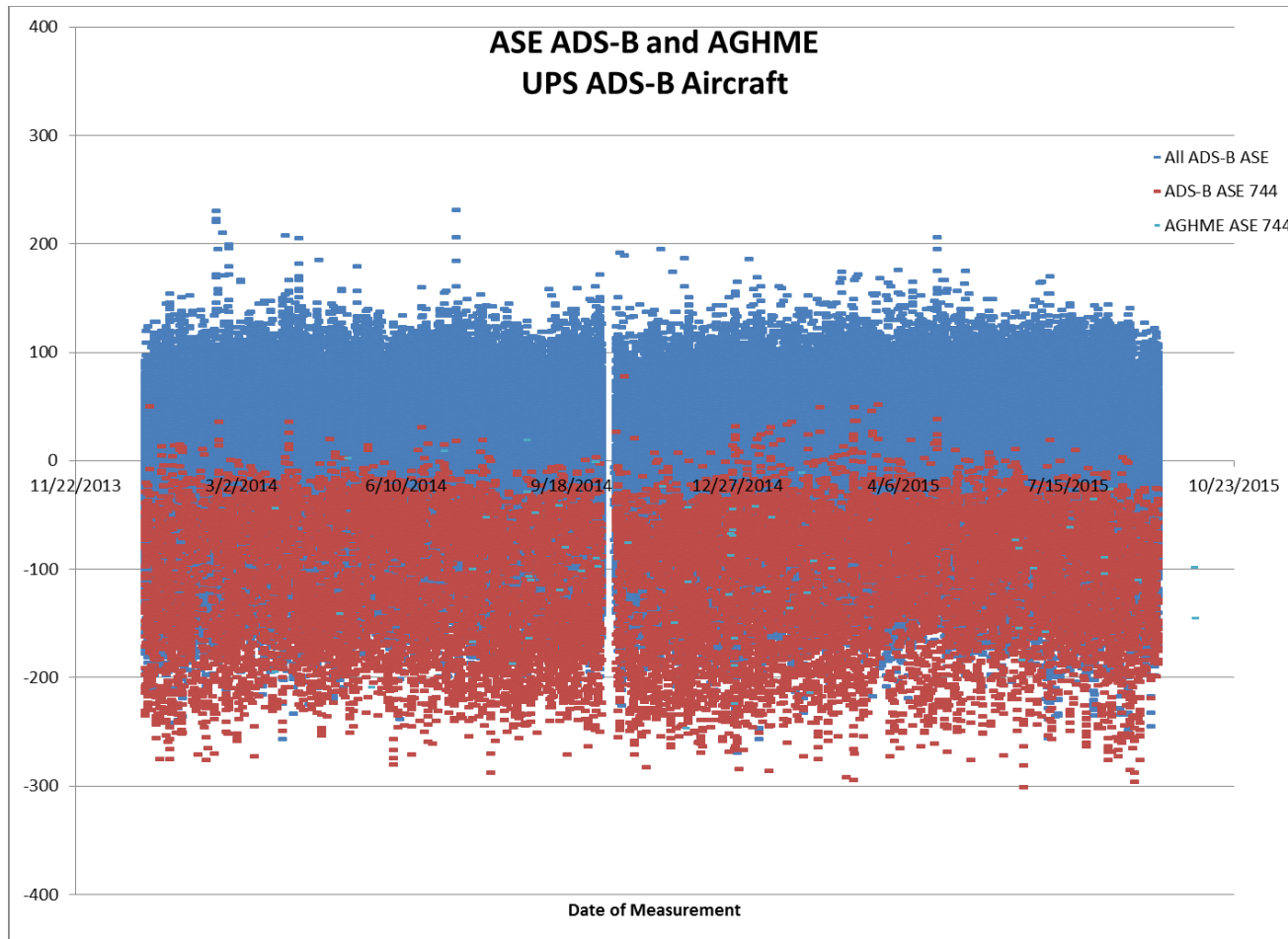
MD-11 bias of
approximately
0ft.



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B744



B744 bias of
approximately
-100ft.

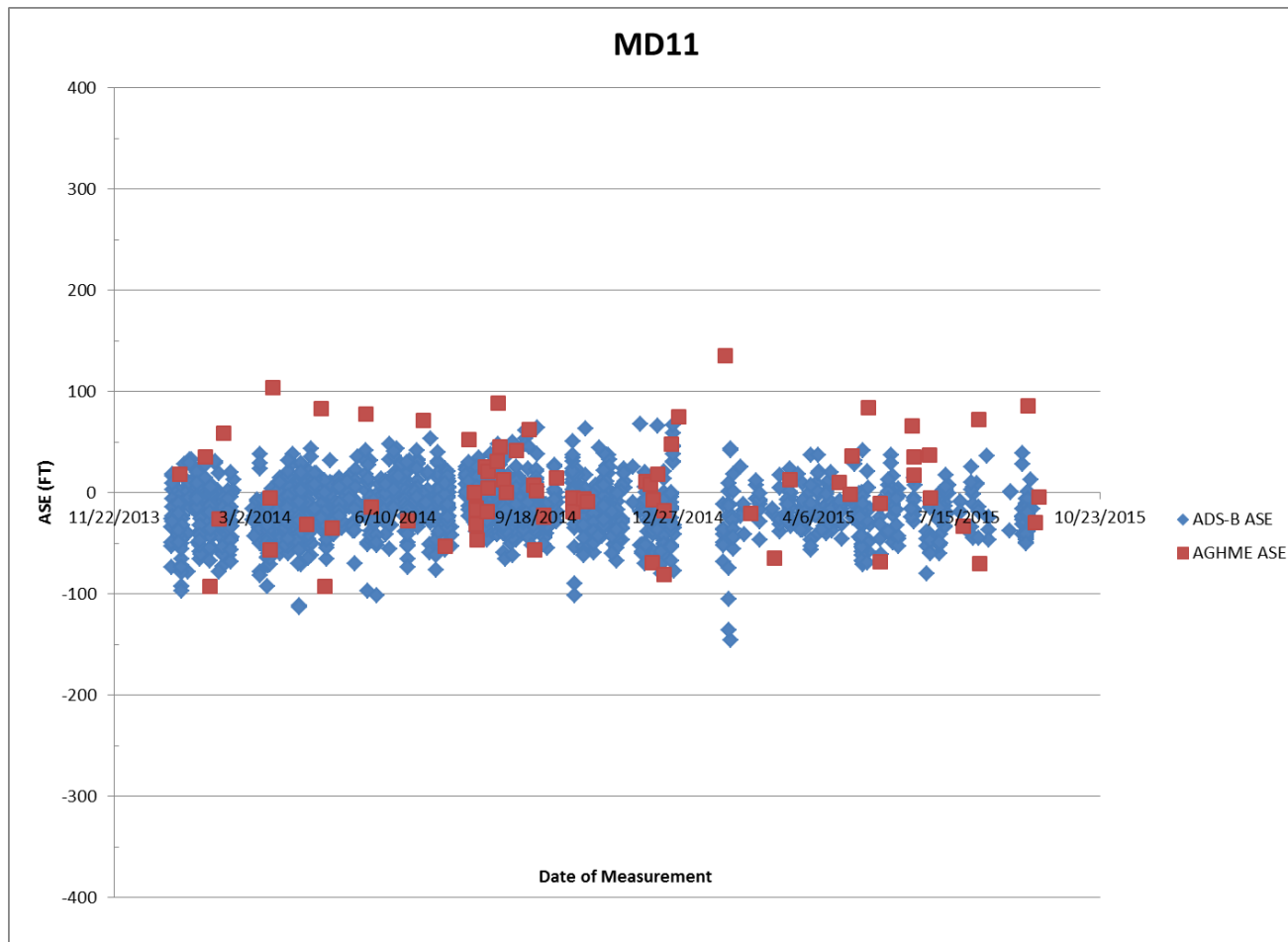


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Comparison of AHGME and ADS-B

Example ASE Measurement (1)

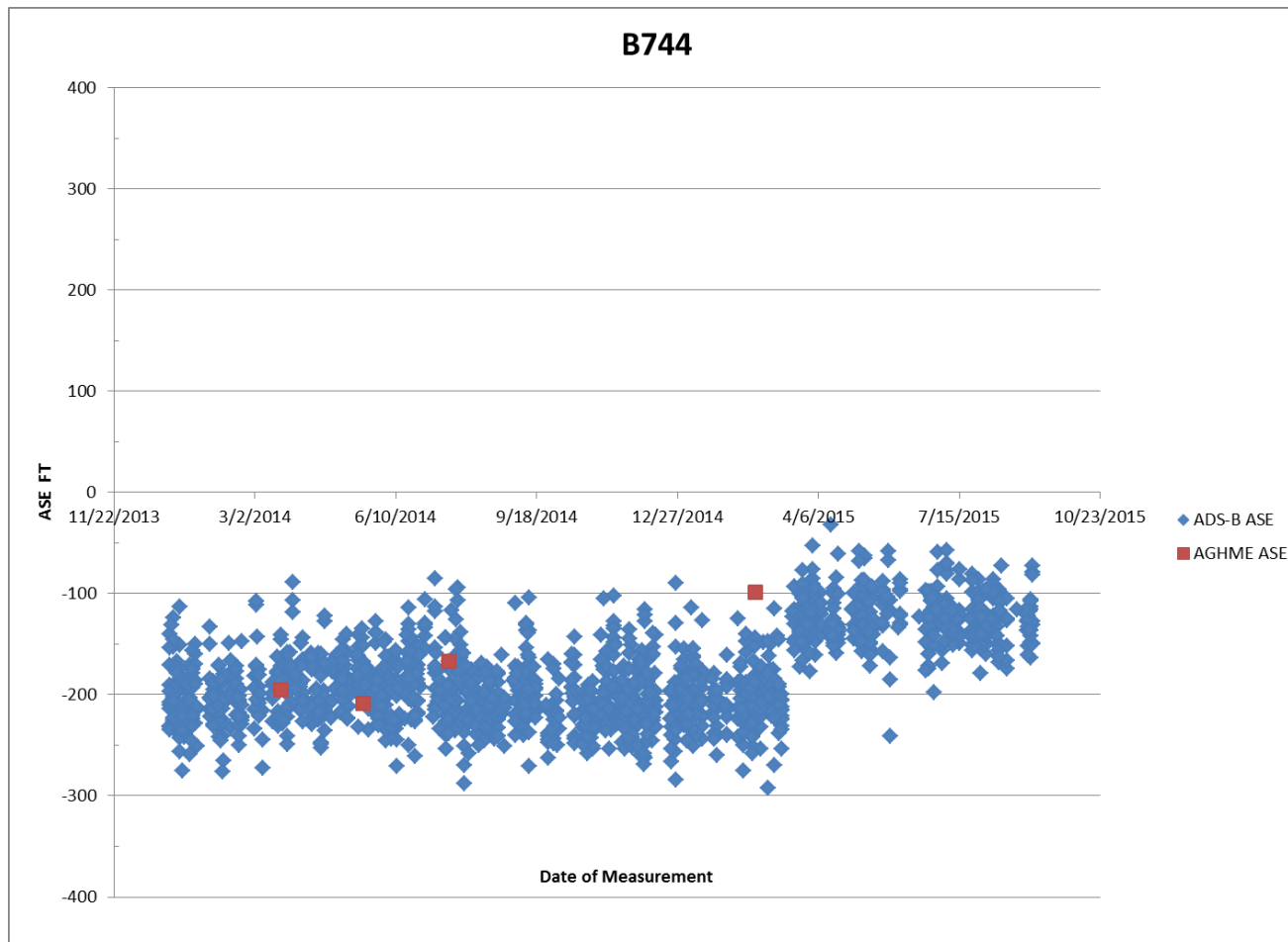


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Comparison of AHGME and ADS-B

Example ASE Measurement (2)



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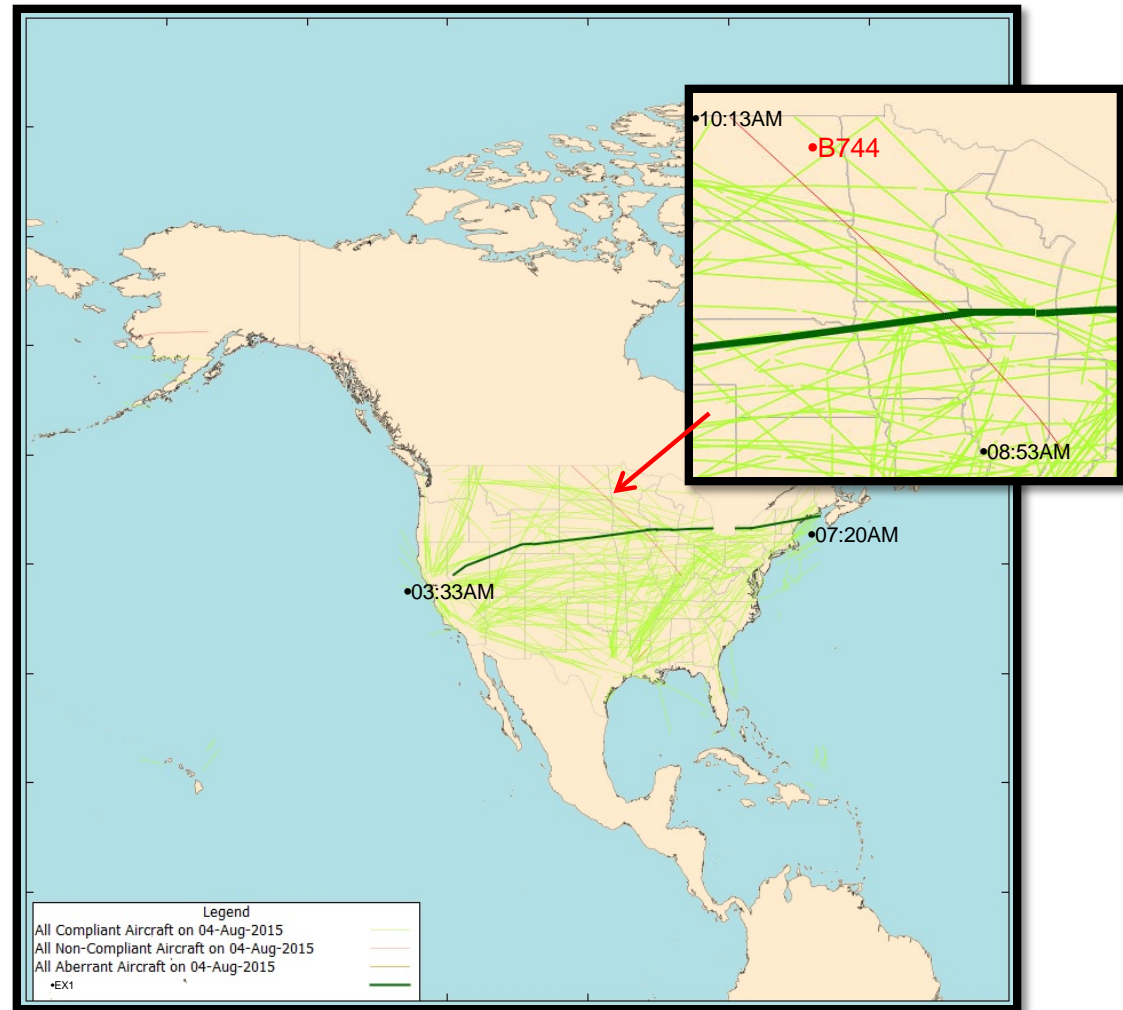
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Aircraft on 4-Aug-15

•LOA on 31-Mar-15

Date	Count of ASE Segments
21-Jul-15	1
27-Jul-15	3
4-Aug-15	12
17-Aug-15	2
12-Sep-15	1
13-Sep-15	2
16-Sep-15	2
24-Sep-15	2
25-Sep-15	2
26-Sep-15	4
29-Sep-15	2
1-Oct-15	3
2-Oct-15	3
Total	39

•469 ADS-B Aircraft ON 04-AUG-15

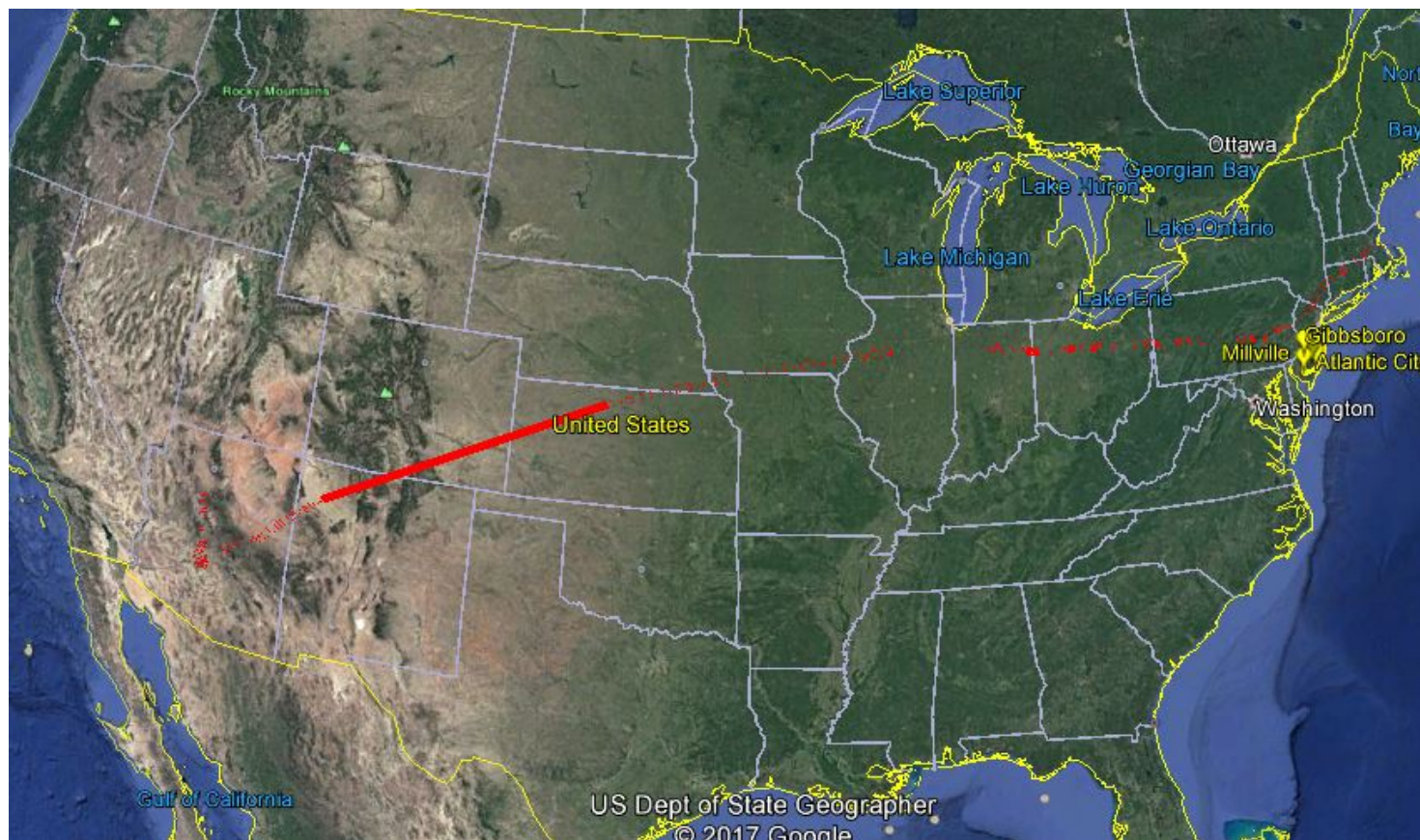


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ADS-B Plot

Flight 1468 Boston
to Phoenix

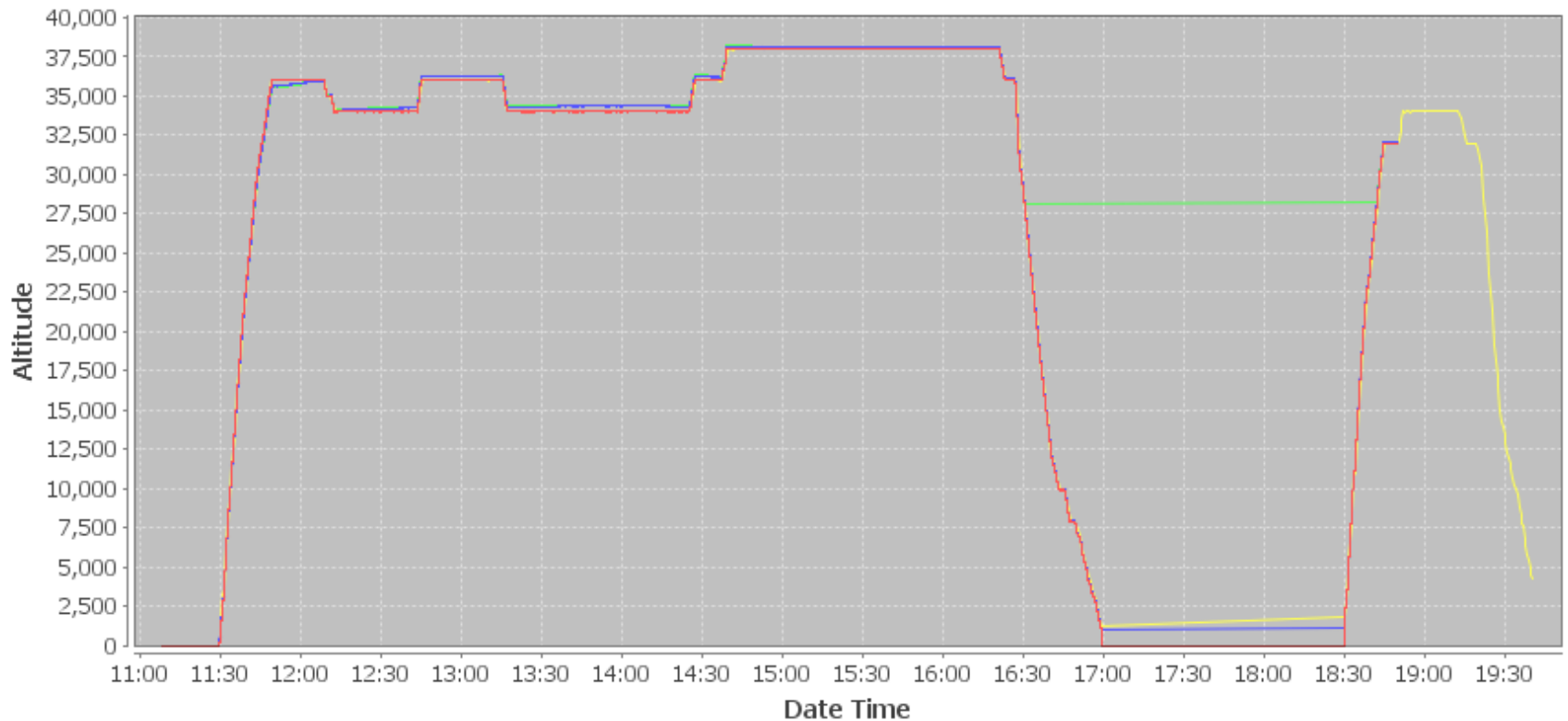


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ADS-B Plot

Level Flight AAL1468



ADS-B ADS-B Chart Frame Application

— Flight Level FDA Pressure Altitude — Flight Level FDA GNSS Ititude — MetData Pressure Altitude — Flight Level SWIM Altitude

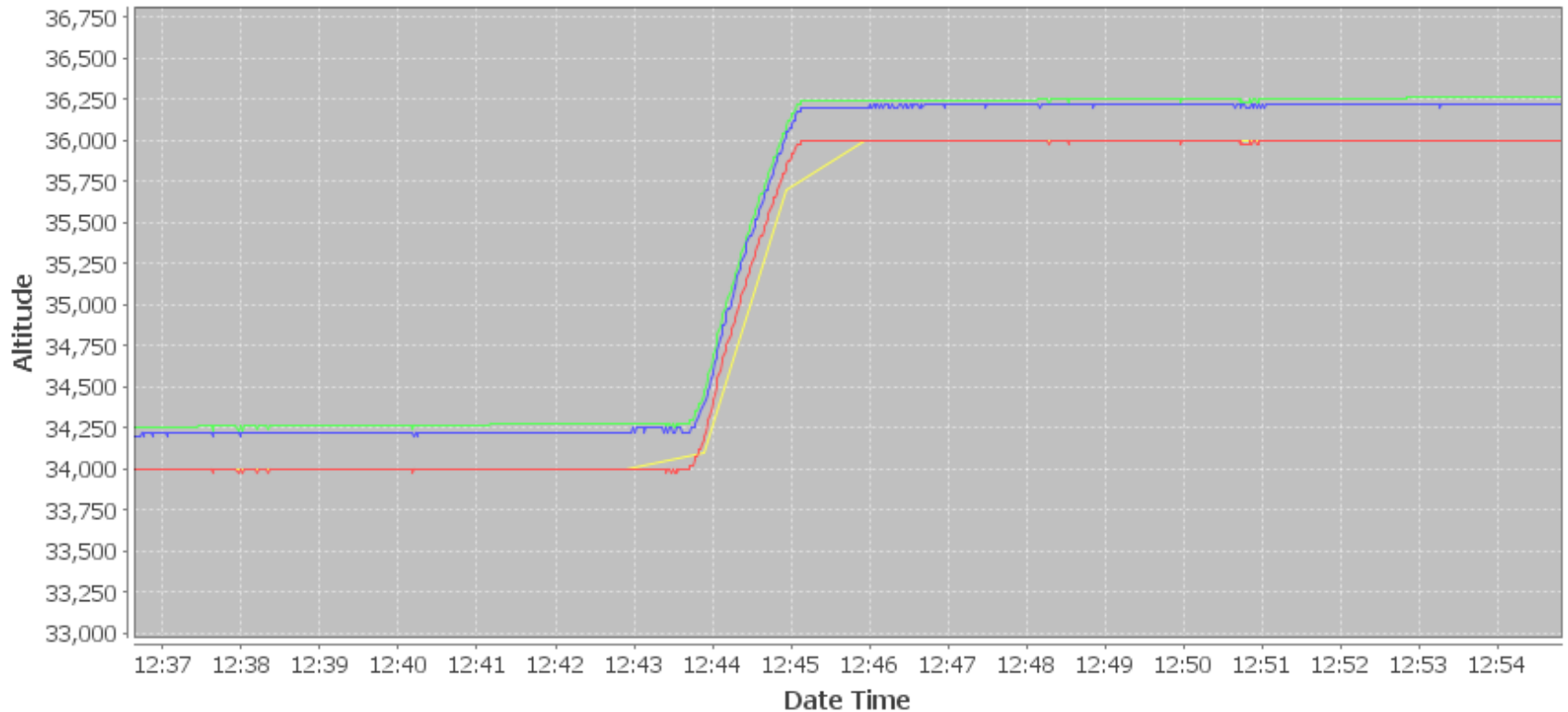


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ADS-B Plot

Level Flight AAL1468



ADS-B ADS-B Chart Frame Application

— Flight Level FDA Pressure Altitude — Flight Level FDA GNSS Ititude — MetData Pressure Altitude — Flight Level SWIM Altitude

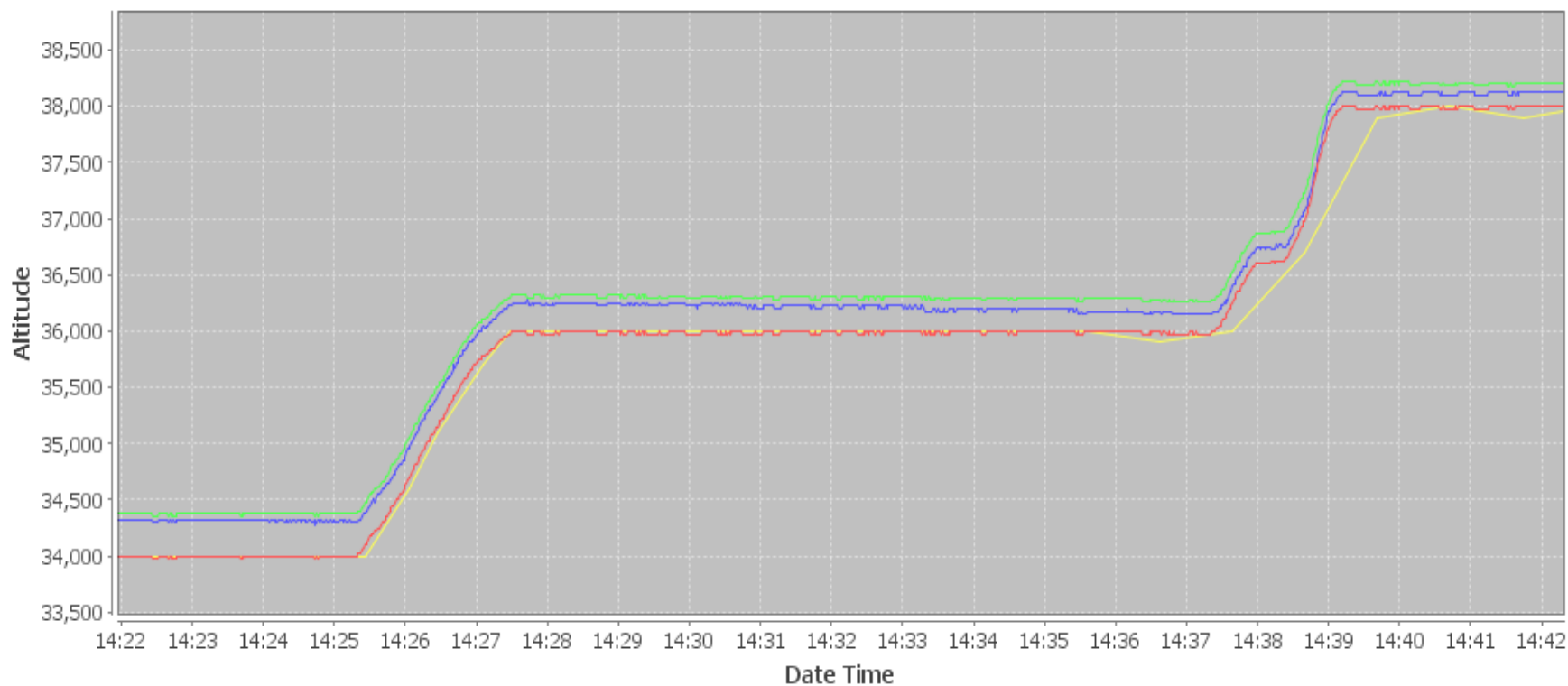


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ADS-B Plot

Level Flight AAL1468



ADSB ADSB Chart Frame Application

— Flight Level FDA Pressure Altitude — Flight Level FDA GNSS Ititude — MetData Pressure Altitude — Flight Level SWIM Altitude

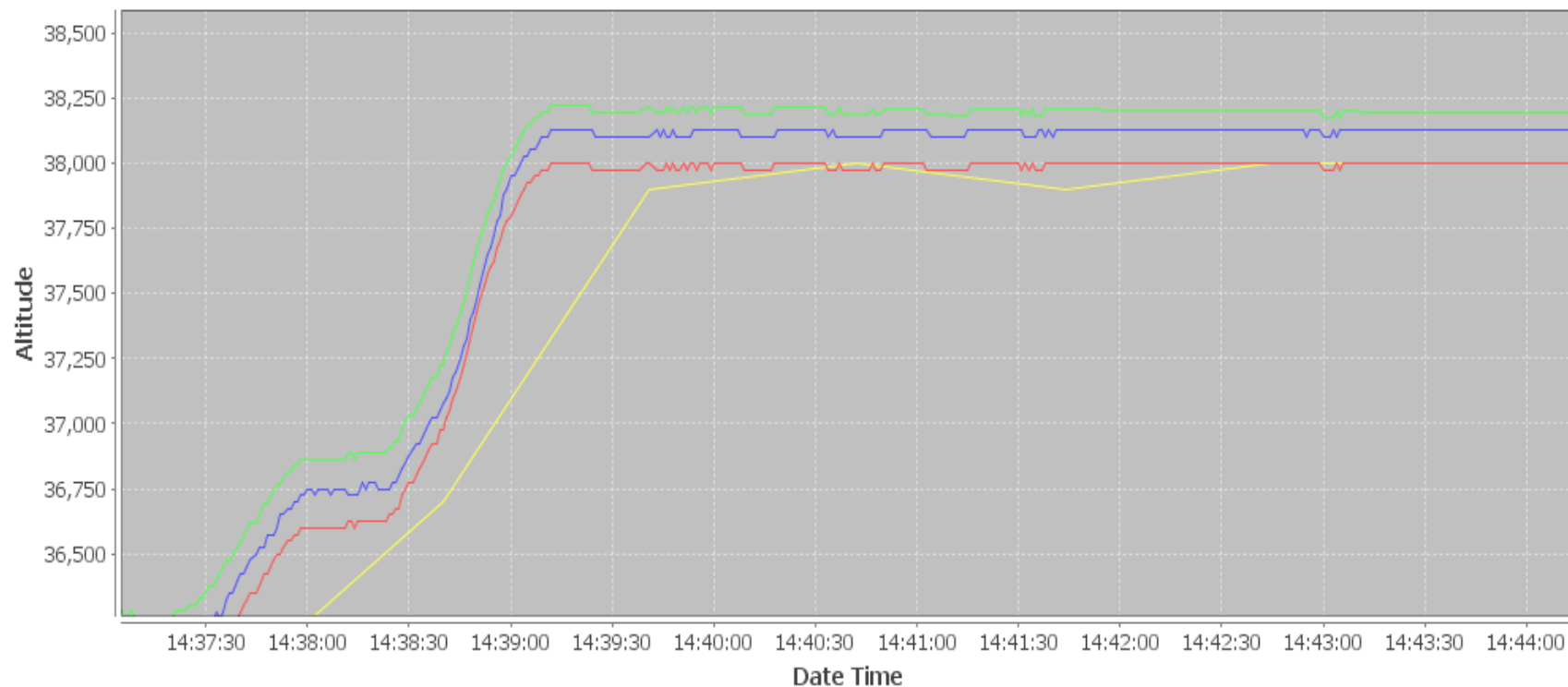


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ADS-B Plot

Level Flight AAL1468



ADS-B ADS-B Chart Frame Application

— Flight Level FDA Pressure Altitude — Flight Level FDA GNSS Ititude — MetData Pressure Altitude — Flight Level SWIM Altitude

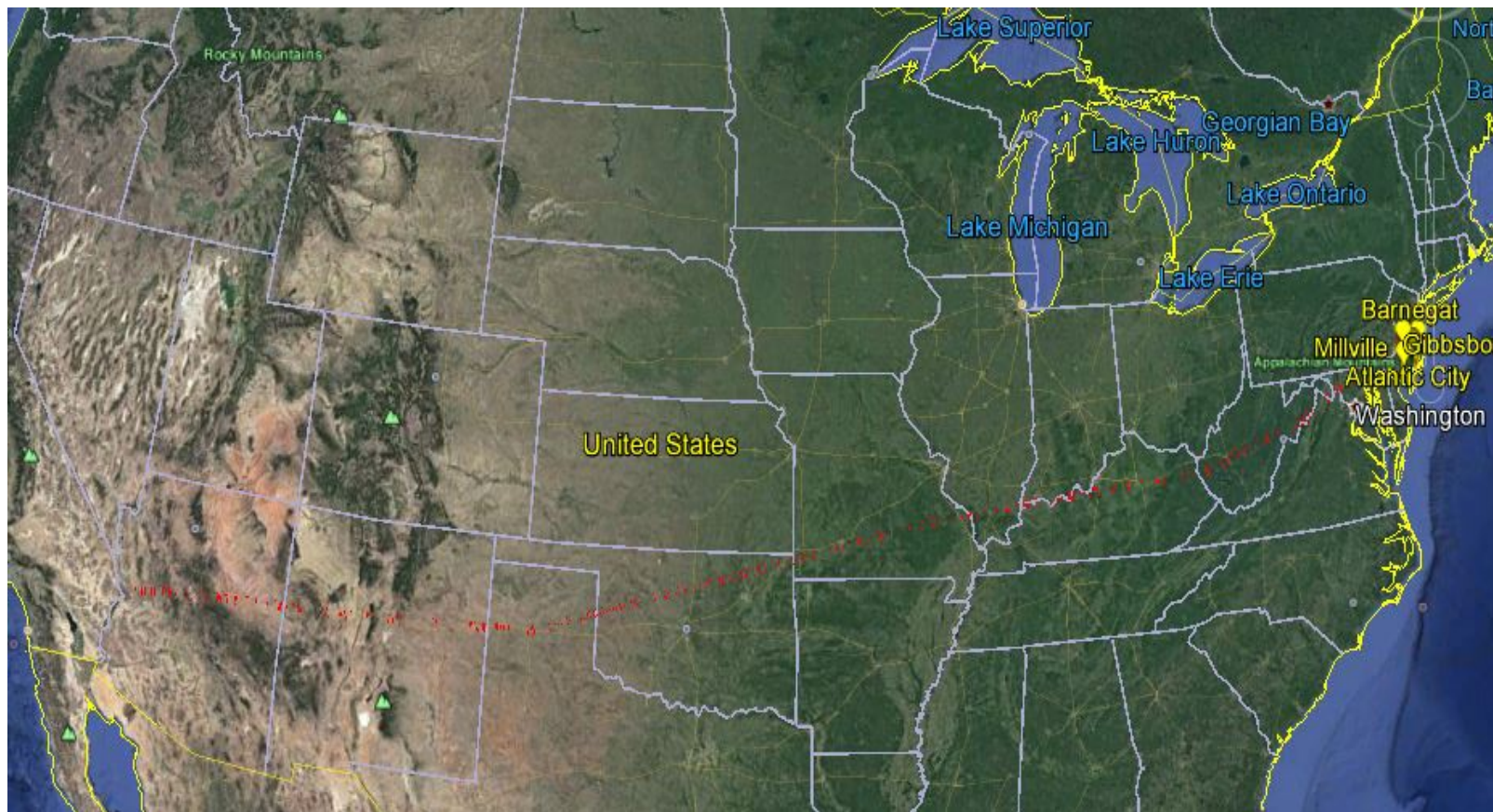


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ADS-B Plot

Flight 423 New York
to Los Angeles

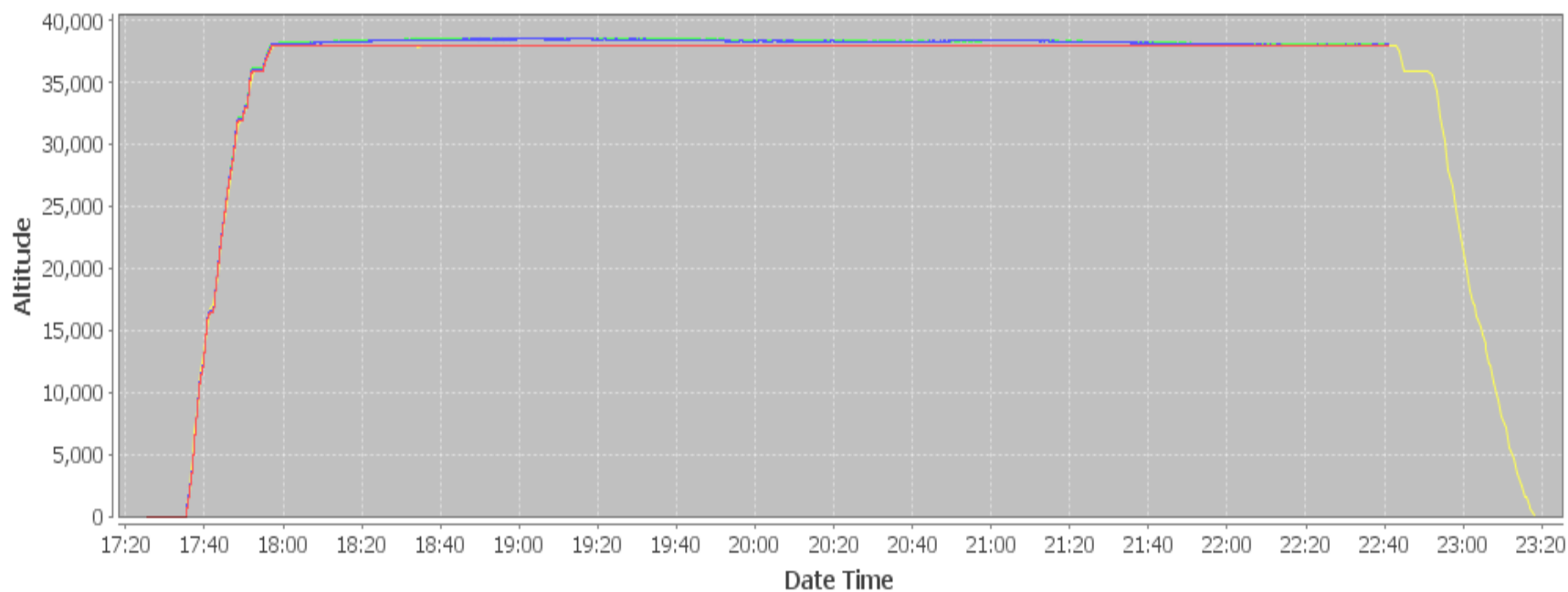


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Next**GEN**

ADS-B Plot

Level Flight DAL423



ADSB ADSB Chart Frame Application

— Flight Level FDA Pressure Altitude — Flight Level FDA GNSS Altitude — MetData Pressure Altitude — Flight Level SWIM Altitude

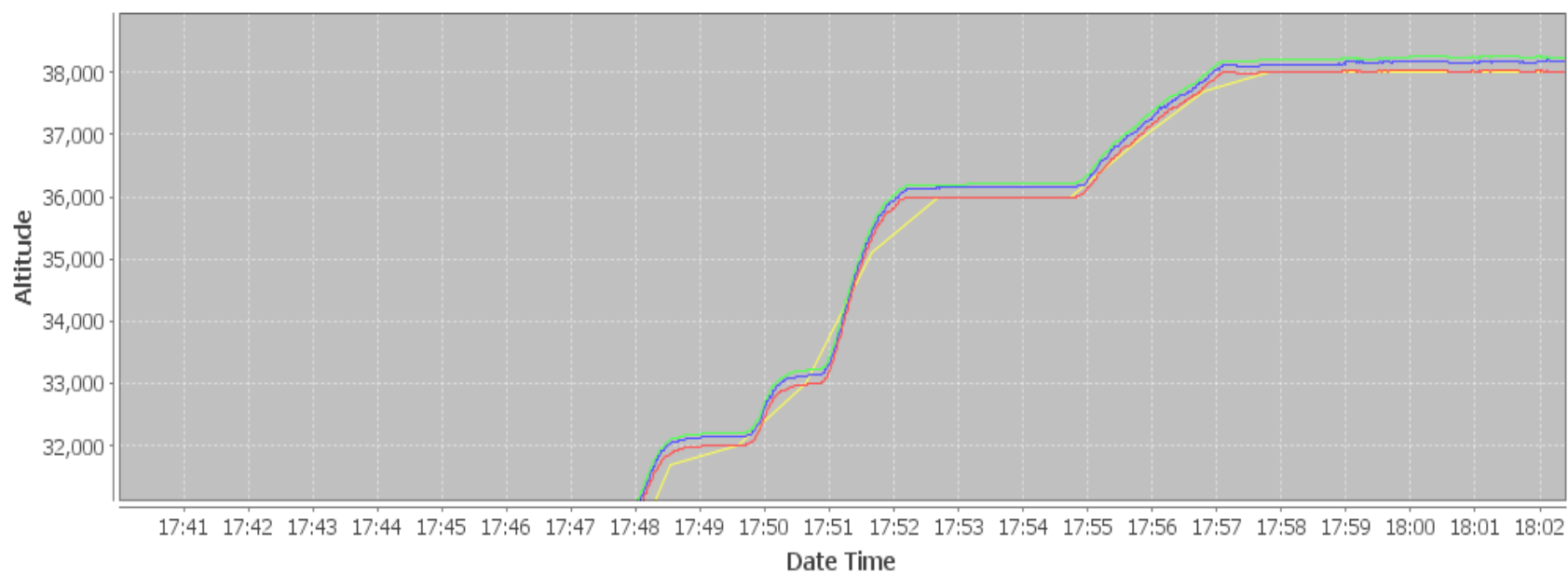


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ADS-B Plot

Level Flight DAL423



ADS-B ADS-B Chart Frame Application

— Flight Level FDA Pressure Altitude — Flight Level FDA GNSS Ititude — MetData Pressure Altitude — Flight Level SWIM Altitude

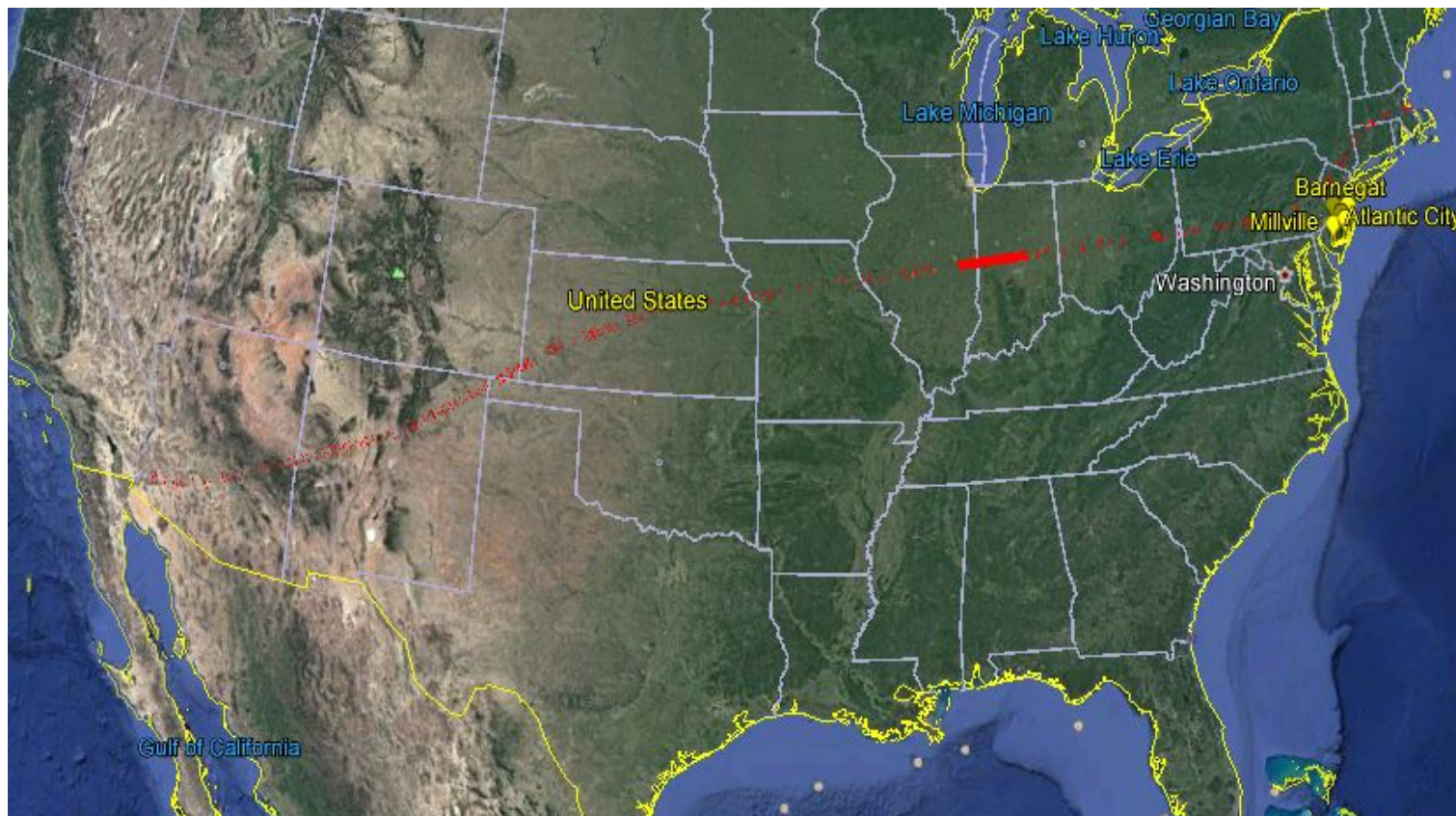


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ADS-B Plot

Flight 619 Boston to
San Diego

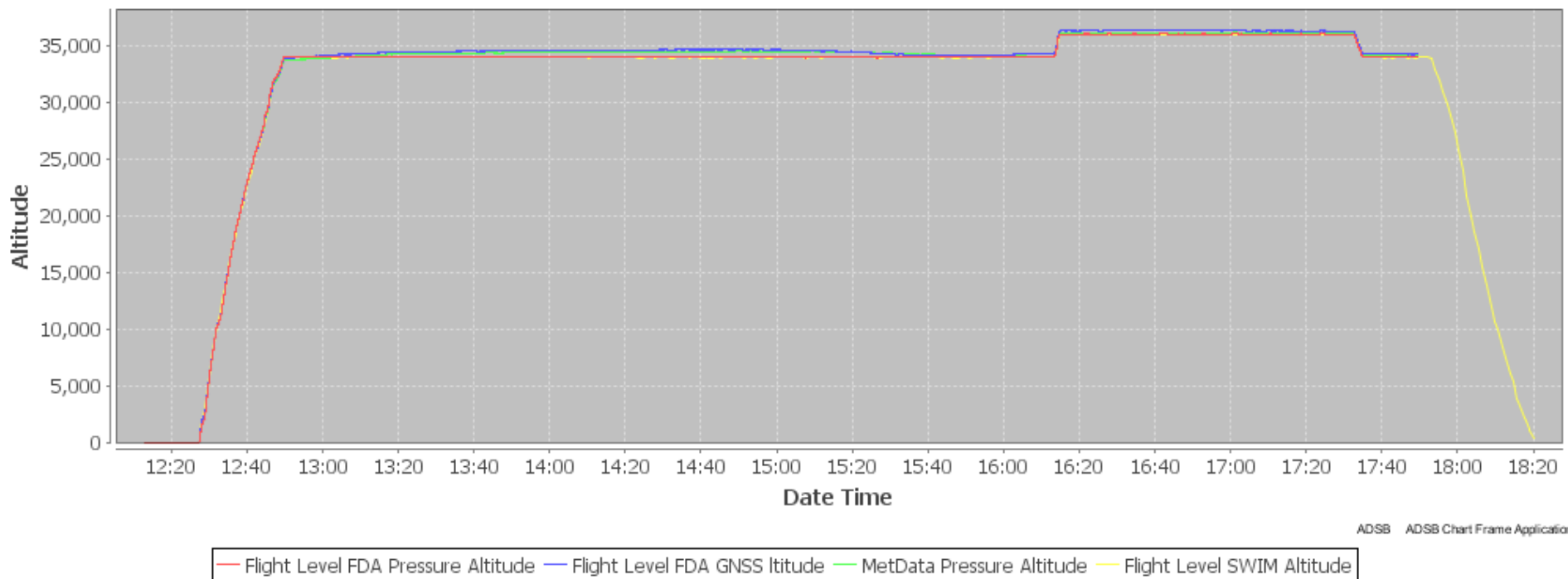


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ADS-B Plot

Level Flight JBU619

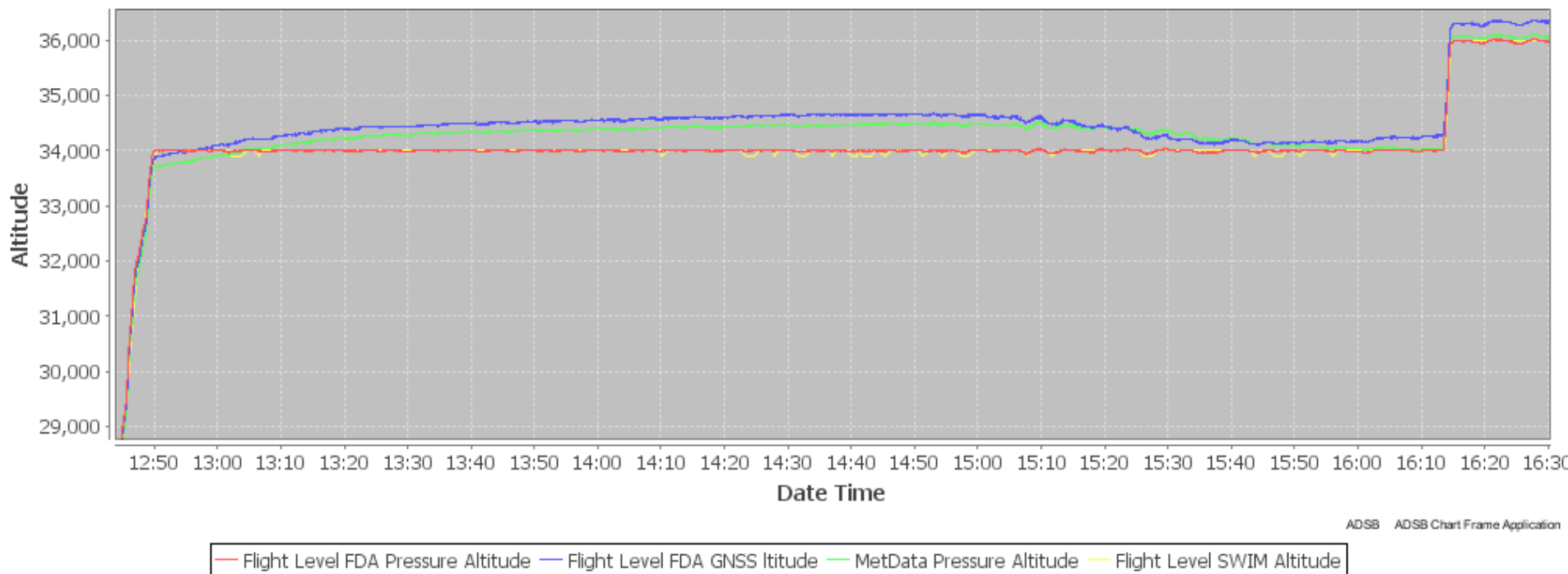


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ADS-B Plot

Level Flight JBU619

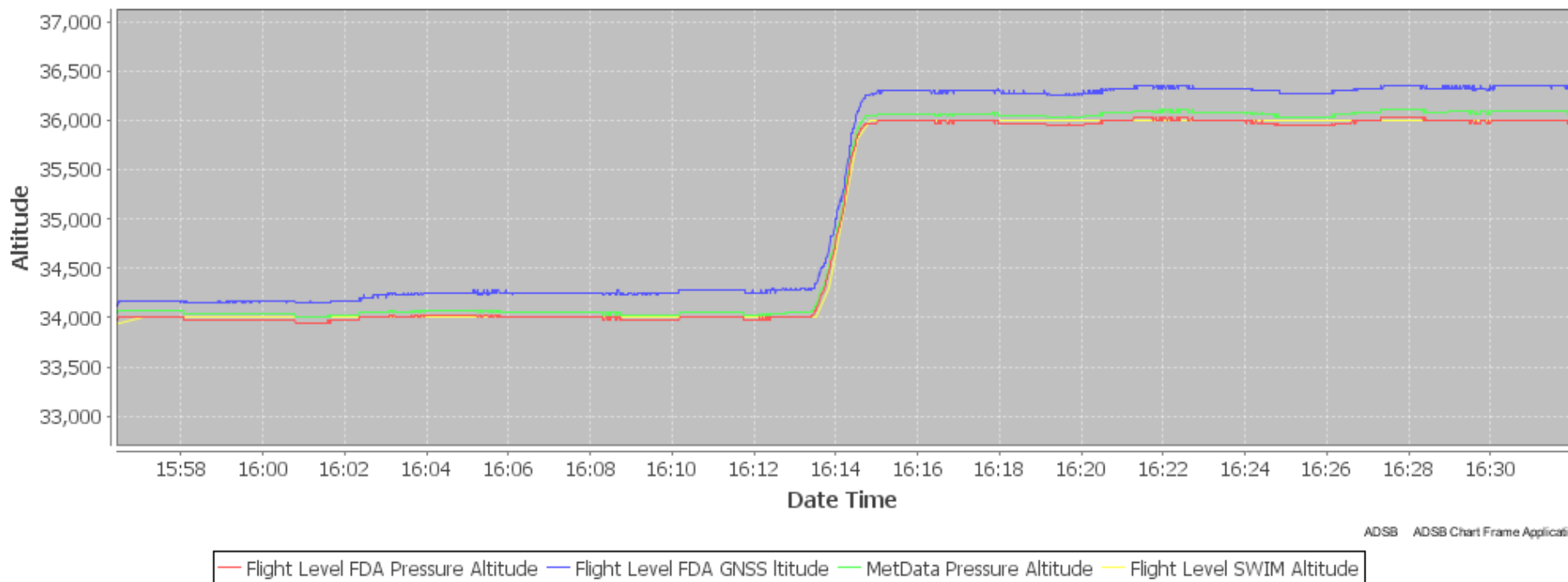


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ADS-B Plot

Level Flight JBU619

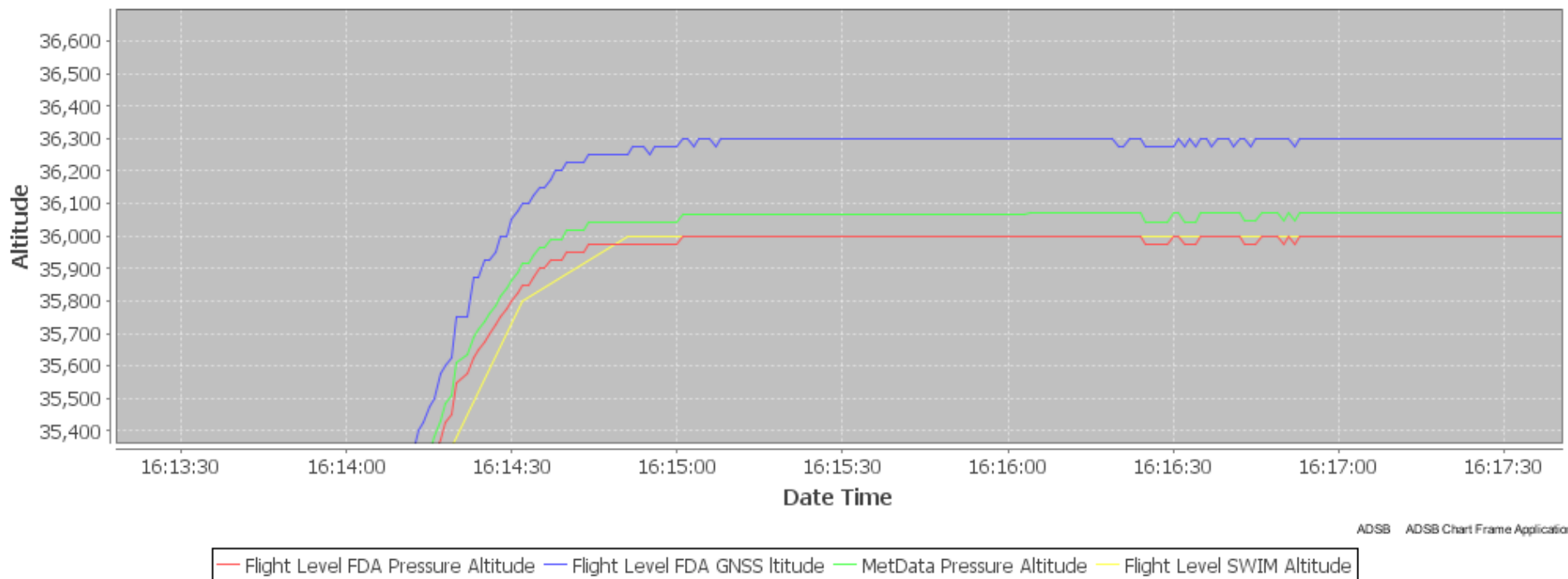


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ADS-B Plot

Level Flight JBU619



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Factors to be Consider for Quality Control

- ❑ Aircraft type performance at Different FL
- ❑ Aircraft type performance during Ascending & Descending
- ❑ Aircraft type performance at Different Speed



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