



**Federal Aviation
Administration**

ADS-B Version 2 Installations

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April 2015



Equipage Monitoring

(11,052 as of Apr 5th, 2015)

Category	Feb 2015 (as of Mar 1 st , 2015)	Mar 2015 (as of Apr 1 st , 2015)	Increase	
Link Ver 2	10,211	10,949	+738	7.2%
1090ES	7,143	7,692	+549	7.7%
UAT	2,728	2,913	+185	6.8%
Dual	340	344	+4	1.2%
US General Aviation	8,811	9,443	+632	7.2%
US Air Carrier	267	276	+9	3.4%
Intl General Aviation	1,039*	1,110*	+71	6.8%
Intl Air Carrier	94	96	+2	2.1%
U.S. Military & U.S. Reserved	24	24	0	0.0%

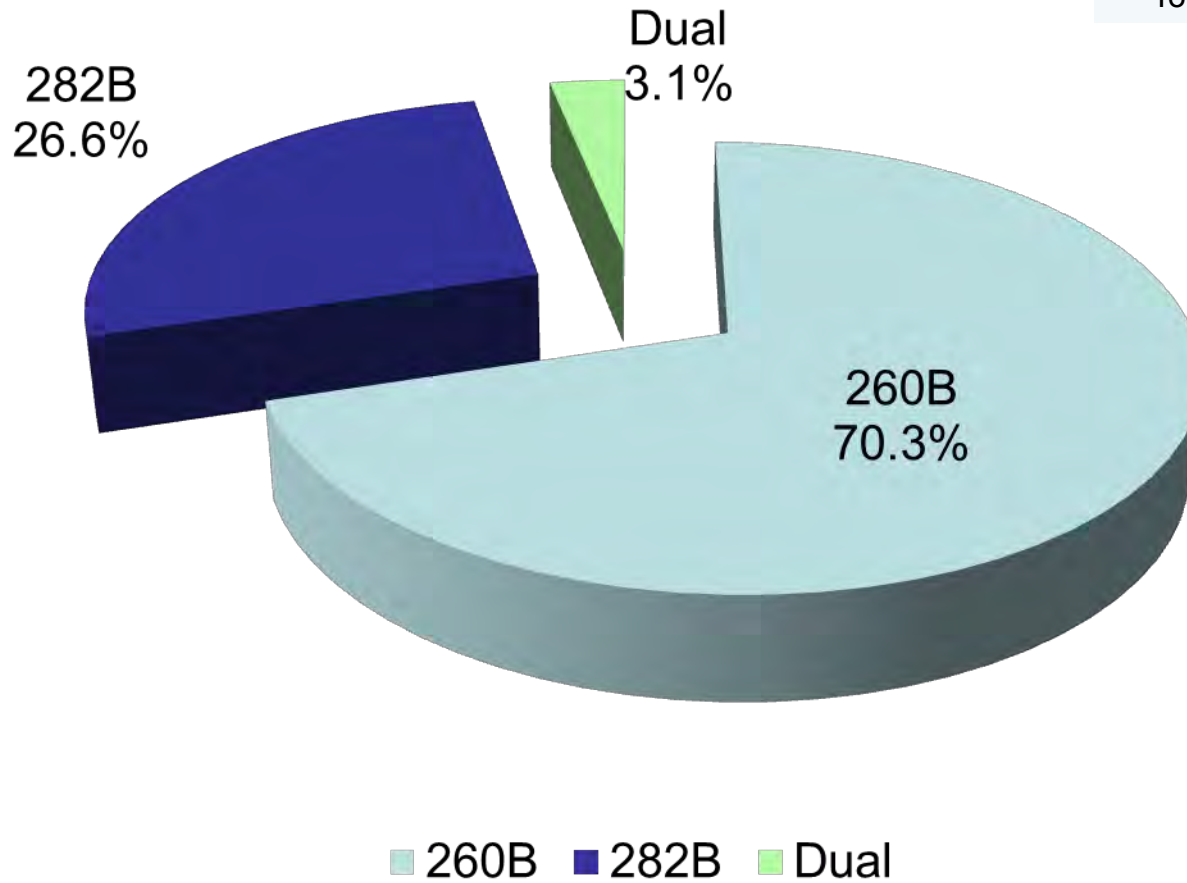
Data Source: www.compliancemonitor.faa.gov

*Aircraft incorrectly reporting outside US ICAO block are included in Intl GA count.



Equipage Monitoring ADS-B Out by Link

Link Type	Count
260B	7,692
282B	2,913
Dual B	344
Total	10,949

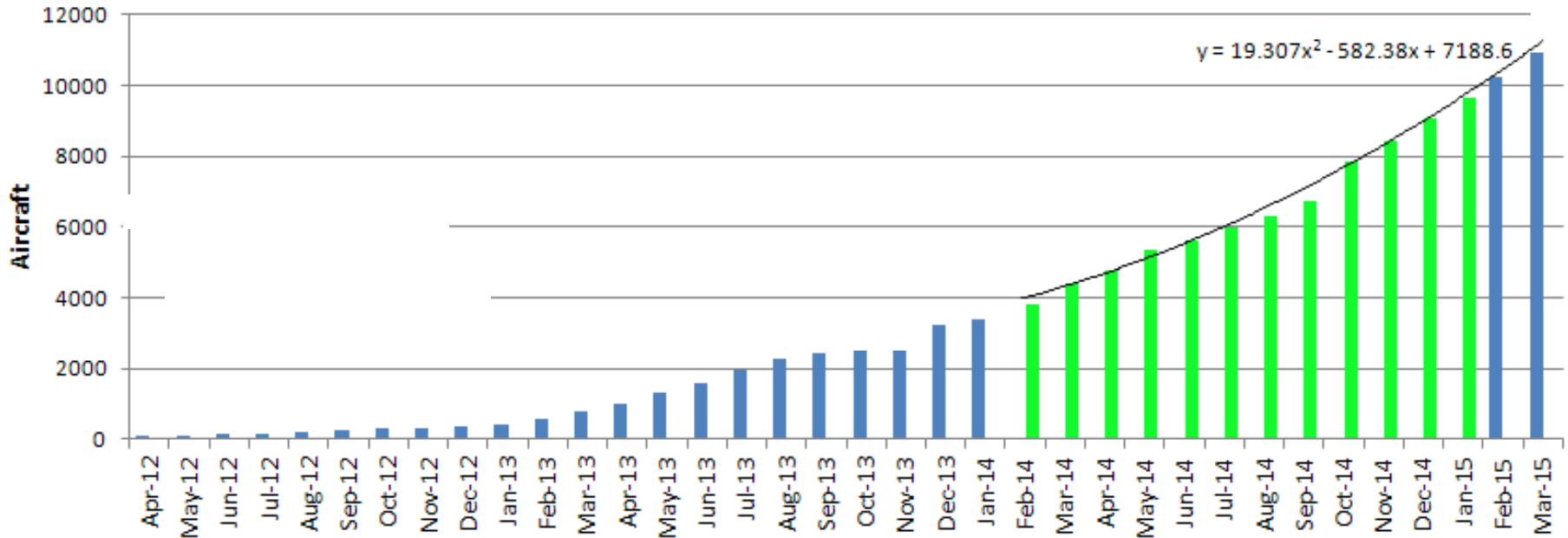


ADS-B Link Version 2 Equipage - Historical Data

April 2012 - March 2015

Curve Based on Feb '14 - Jan '15 data

Projected to 11,245 by end of Mar '15
Actual 10,949 (-296)



Date	Projected Equipage (based on 12-month equation above)
Jan 1 st , 2016	20,078
Jan 1 st , 2017	36,721
Jan 1 st , 2018	58,925
Jan 1 st , 2019	86,689
Jan 1 st , 2020	120,014

Projected to 12,072 by end of Apr '15



Avionics Issues

Title	Notes
Missing Barometric Pressure Altitude	42 aircraft not reporting Barometric Altitude as of March 16, 2015
Air/Ground Determination Issues	Aircraft incorrectly reporting in Air while On-Ground.
Flight ID issues including Missing Flight ID 3-letter identifier	155 flights with number-only Flight ID in last 30 days as of March 16, 2015
Duplicate & Wrong ICAOs	Aircraft reporting FFFFFF, 123456, 000000, A00000
Invalid Mode 3/A Code - Mitigation in place	78 as of 3/16/2015 58-of-78 with ops in Feb or March 2015 73 as of 2/2/2015
Incorrect Emitter Category	Approx 15% of aircraft reporting Emitter Cat = 2 should be reporting Category = 1
Aircraft with Position Errors	Position jumps can be noticed on aircraft requiring a software update to the position source.

Duplicate ICAO address

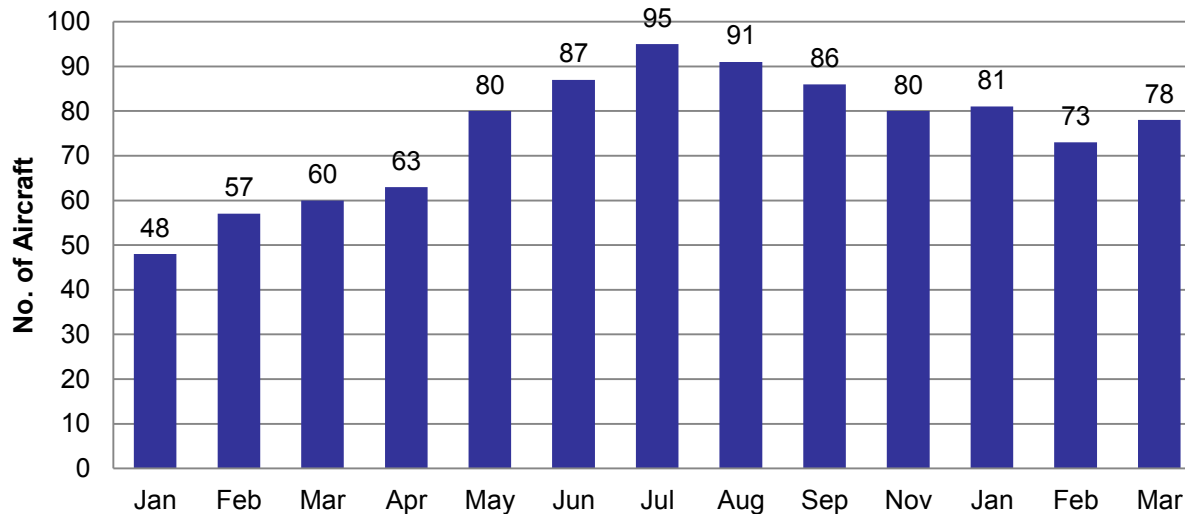


Two aircraft operating at the same time within 170NM of each other with same ICAO

Aircraft flying near Williamsport, PA is using the same ICAO belonging to another aircraft instead of the correct ICAO code

APR-007 Invalid/Missing Mode 3/A Codes

UAT LV2s Reporting Compliant NIC/NACp/NACv/SIL/SDA
Mode 3/A Flagged Invalid



2.9% of
LV2 UAT
aircraft

Notes

- No Anonymous Reports
- Compliant NIC/NACp/NACv/SIL/SDA $\geq 99\%$ and Valid $\geq 99\%$
- No Vehicles
- At least 10,000 reports

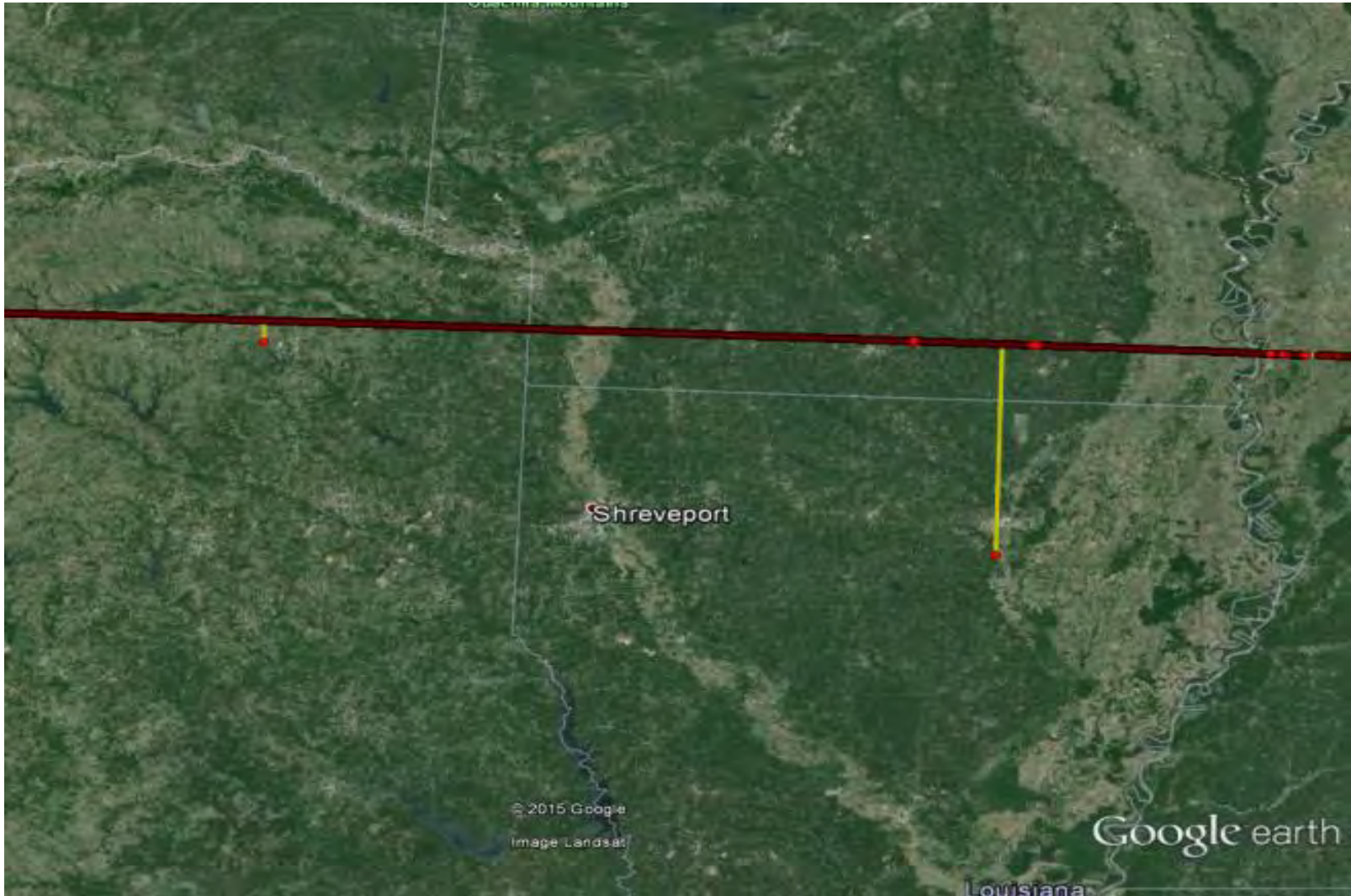
Incorrect Emitter Category

ADS-B Emitter Category SET "A"	
Coding	Meaning
0	No ADS-B Emitter Category Information
1	Light (<15500 lbs.)
2	Small (15500 to 75000 lbs.)
3	Large (75000 to 300000 lbs.)
4	High-Vortex Large (aircraft such as B-757)
5	Heavy (> 300000 lbs.)
6	High Performance (>5g acceleration and > 400 knots)
7	Rotorcraft

Emitter Category being set to incorrect values. For example:

- a) General Aviation setting Emitter value to "6".
- b) Value being set to "2" when should be a "1".

Aircraft with Position Errors



Corrective Actions

- **ADS-B Focus Team was created to Investigate compliance issues and work with industry**
 - Operators and installers contacted by AFS
 - Manufacturers contacted by AIR
- **Support outreach programs related to ADS-B**
 - Conduct seminars/briefings at trade & industry events
 - Coordinate related articles in trade & industry publications
 - Provide information on ADS-B through the NextGen website (<https://www.faa.gov/nextgen/implementation/programs/adsb>)
- **Provide ADS-B Avionics Checks**
 - Verify ADS-B installations to ensure proper compliance prior to January 1, 2020
 - Currently, aircraft operators flying in U.S. airspace may request an ADS-B compliance check by sending an e-mail to Flight Standards.
 - The FAA plans to provide aircraft operators the ability to access their ADS-B compliance report through a public web query.

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