

# **GTE/21 WP/08**

## **Vertical Safety**

### **Monitoring Report**

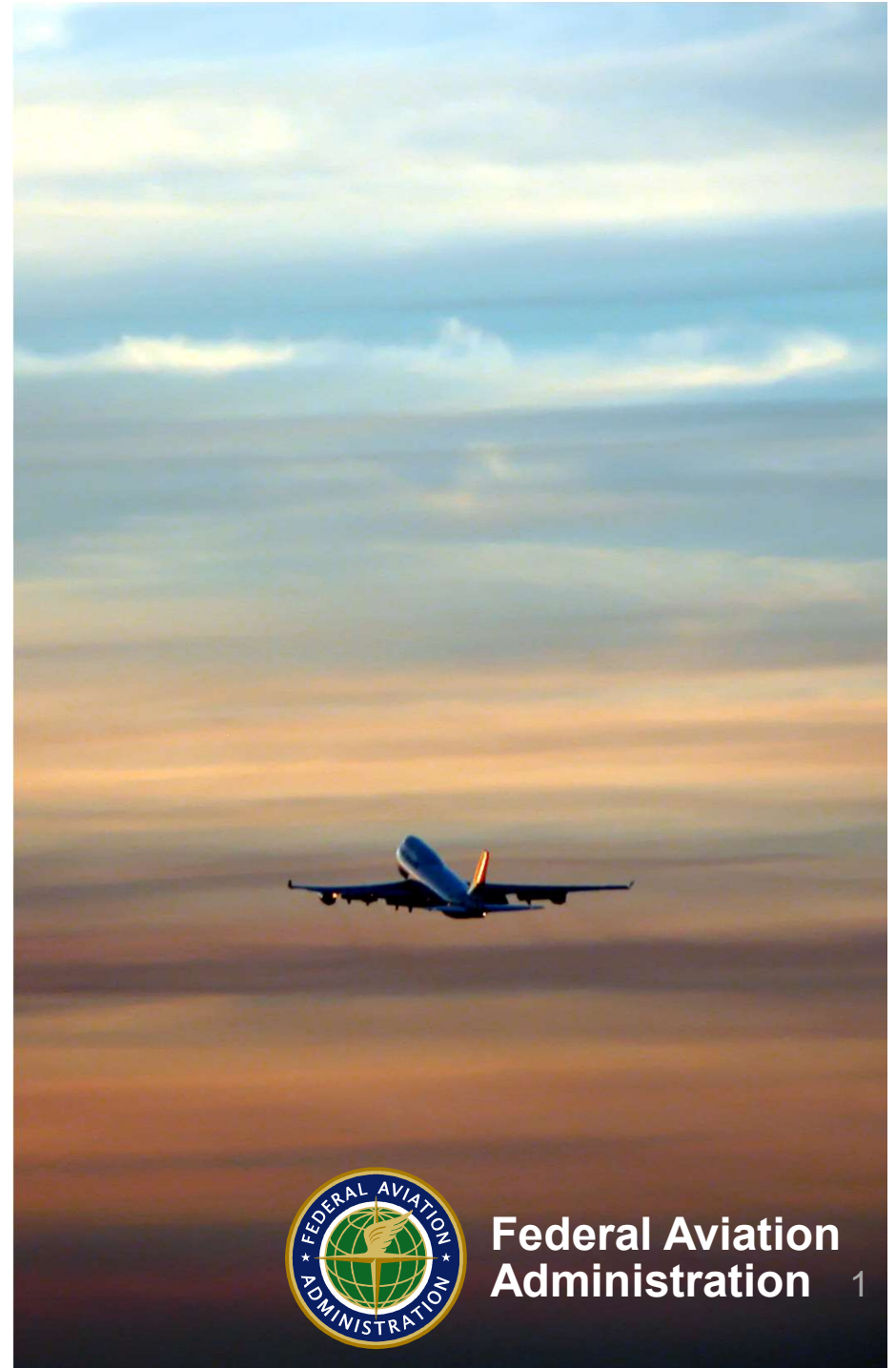
**Miami Oceanic, New York West,  
and San Juan FIRs**

## **CALENDAR YEAR 2020**

Presented to: GTE/21

By: NAARMO

Date: 23 - 26 Aug 2021



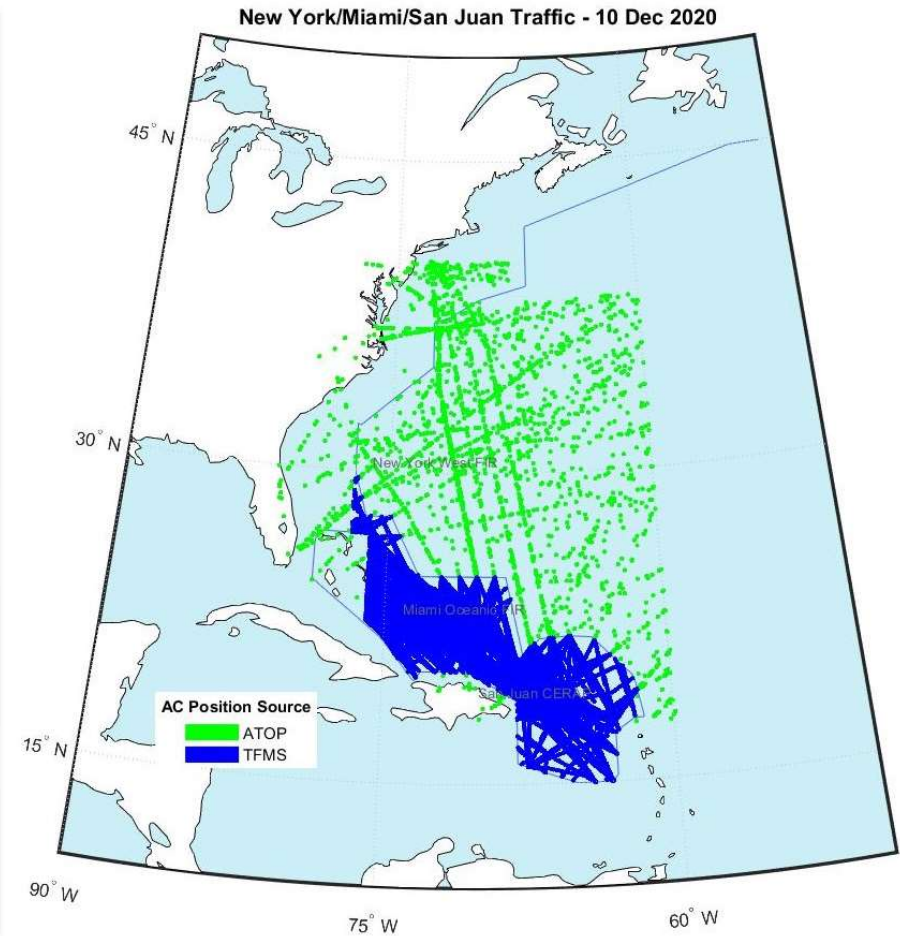
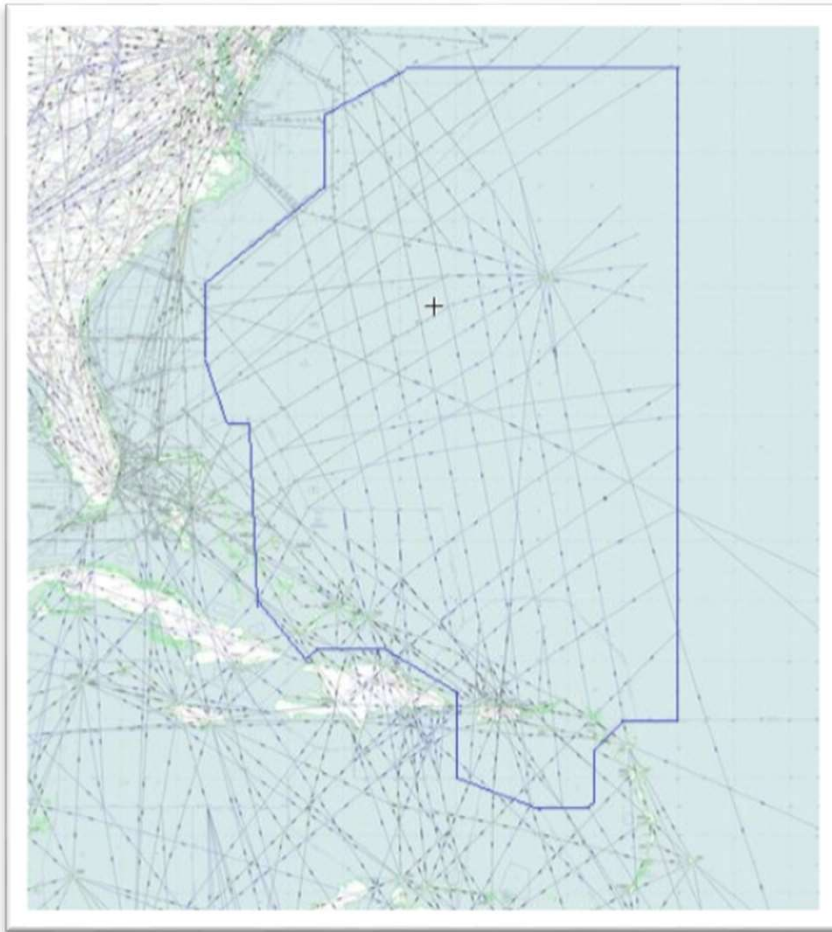
**Federal Aviation  
Administration** 1

# Background

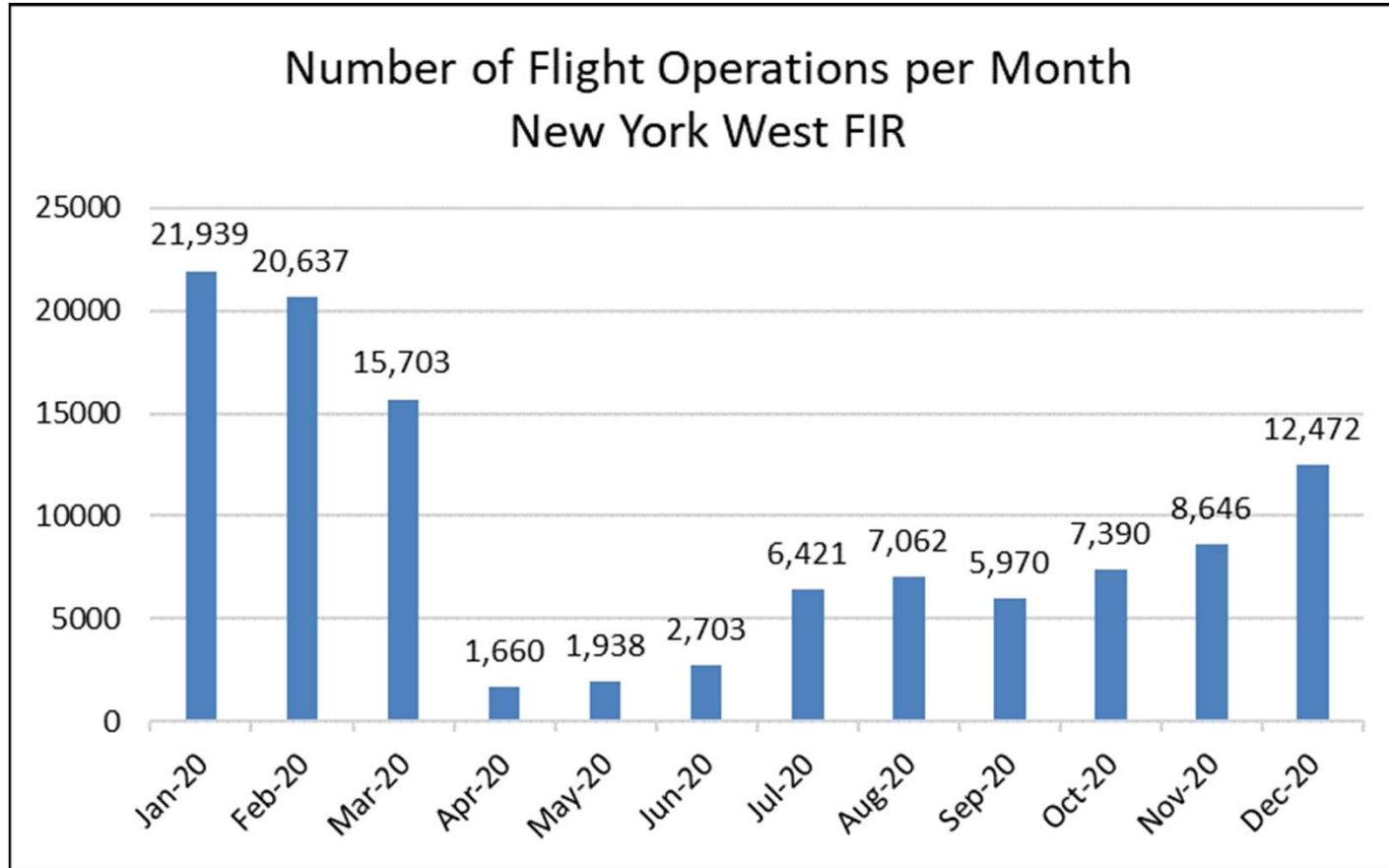
- **North American Approvals Registry and Monitoring Organization (NAARMO)**
  - RMA Services provided by the U.S. Federal Aviation Administration
  - Located at the WJH Technical Center in Atlantic City, New Jersey



# Miami Oceanic, New York West, Oceanic, and San Juan FIRs



# Number of Flight Operations per Month – Calendar Year 2020



# Reported LHDs by Month – 2020

*Includes Operational and Technical LHDs*

Month	Count	Duration at Unexpected FL (mins)	Number of Unexpected FLs Crossed
Jan-20	3	3	2
Feb-20	2	1	0
Mar-20	3	5	2
Apr-20	0	0	0
May-20	0	0	0
Jun-20	1	0	0
Jul-20	1	0	0
Aug-20	0	0	0
Sep-20	1	0	0
Oct-20	0	0	0
Nov-20	3	10	1
Dec-20	2	1	0
<b>TOTAL</b>	<b>16</b>	<b>20</b>	<b>5</b>

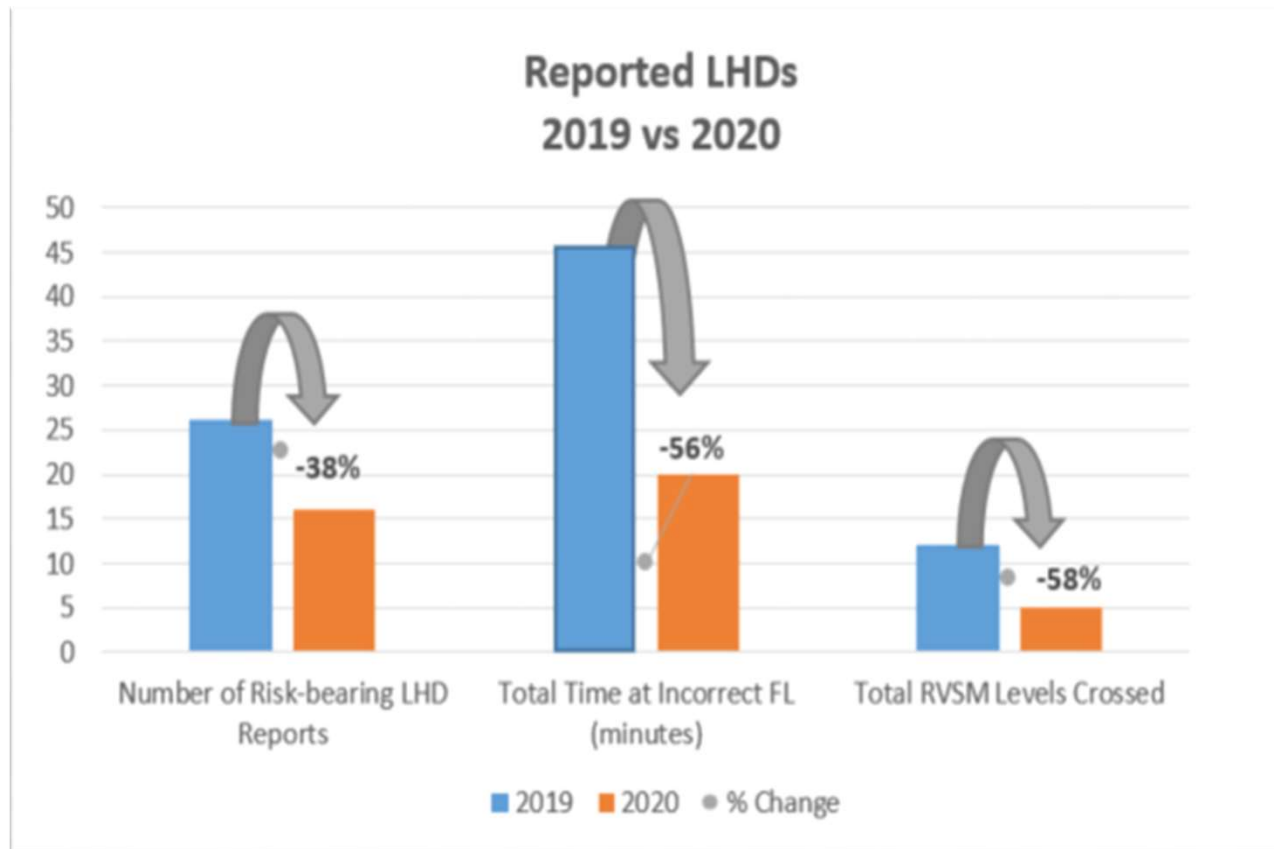


# Reported LHDs by Category - 2020

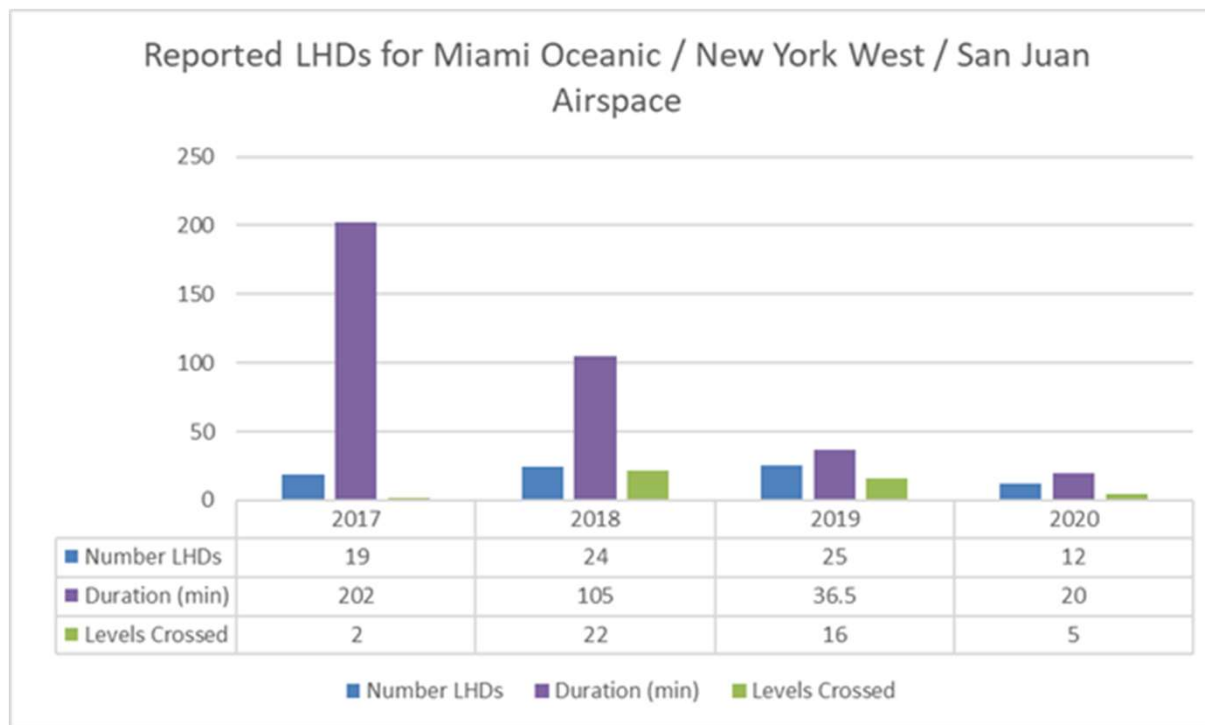
Category	Category Description	Count	Duration Incorrect FL (min)	Number Incorrect FLs Crossed
A	Flight crew failing to climb / descend the aircraft as cleared	2	2	2
B	Flight crew climbing / descending without ATC clearance	3	9	3
D	ATC system loop error; (e.g., ATC issues incorrect clearance or flight crew misunderstands clearance message)	3	7	0
E	Coordination errors in the ATC-unit-to-ATC-unit transfer of control responsibility as a result of human factors issues	3	2	0
G	Aircraft contingency event leading to sudden inability to maintain assigned flight level	1	0	0
J	TCAS resolution advisory; flight crew correctly following the resolution advisory	2	0	0
L	An aircraft being provided with RVSM separation is not RVSM approved (e.g. flight plan indicating RVSM approval but aircraft not approved)	2	0	0
<b>TOTAL</b>		<b>16</b>	<b>20</b>	<b>5</b>



# 2020 vs 2019 Comparison



# Reported LHDs for Vertical Operational Risk



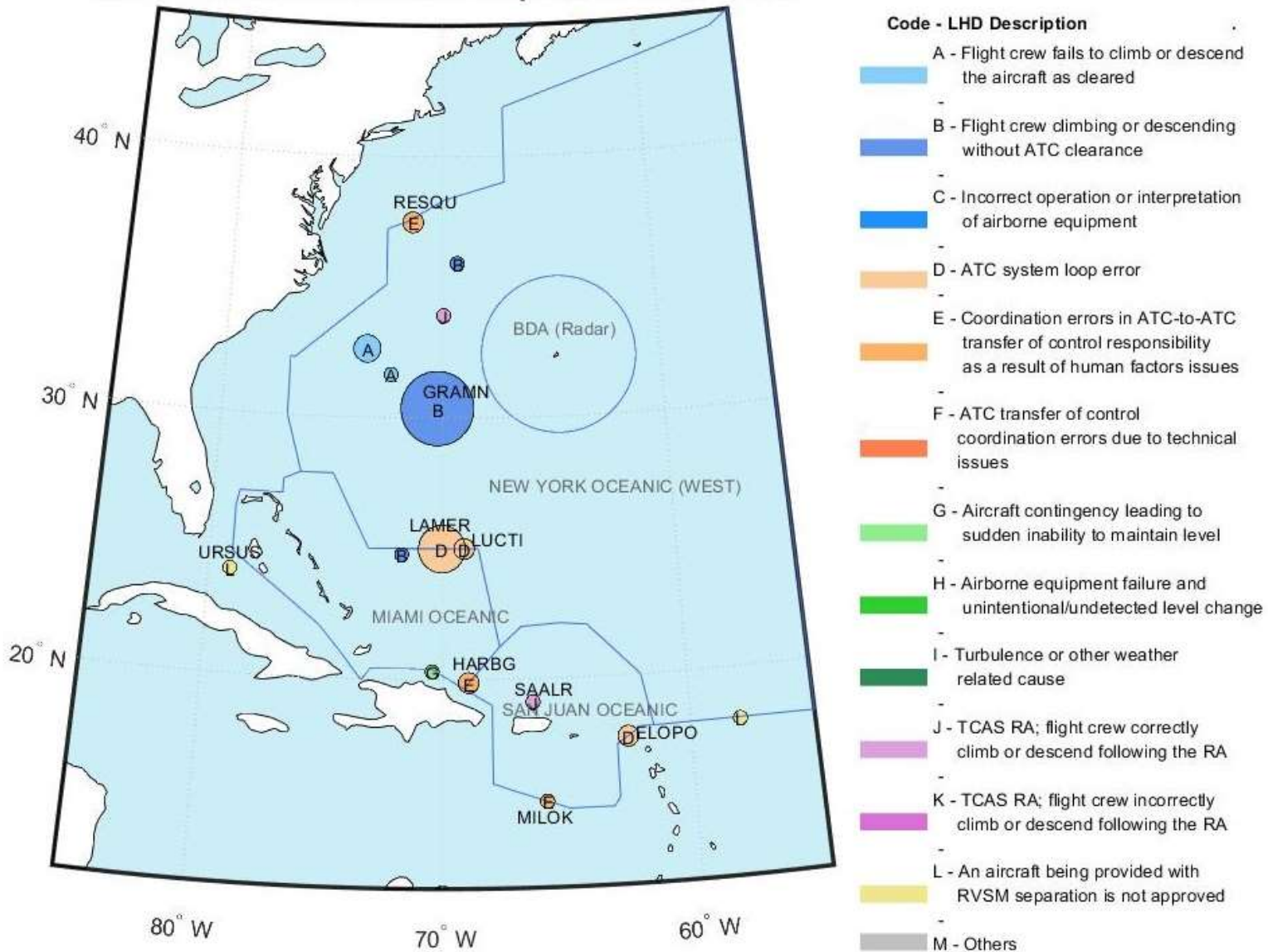
Calendar  
Year  
2020



Airspace	LHD Count	Duration at Incorrect FL (min)	Number FLs crossed
Miami Oceanic and San Juan FIRs	5	2	2
New York West FIR	7	18	3
<b>Total</b>	<b>12</b>	<b>20</b>	<b>5</b>



# New York/Miami/San Juan Reported LHDs - 2020



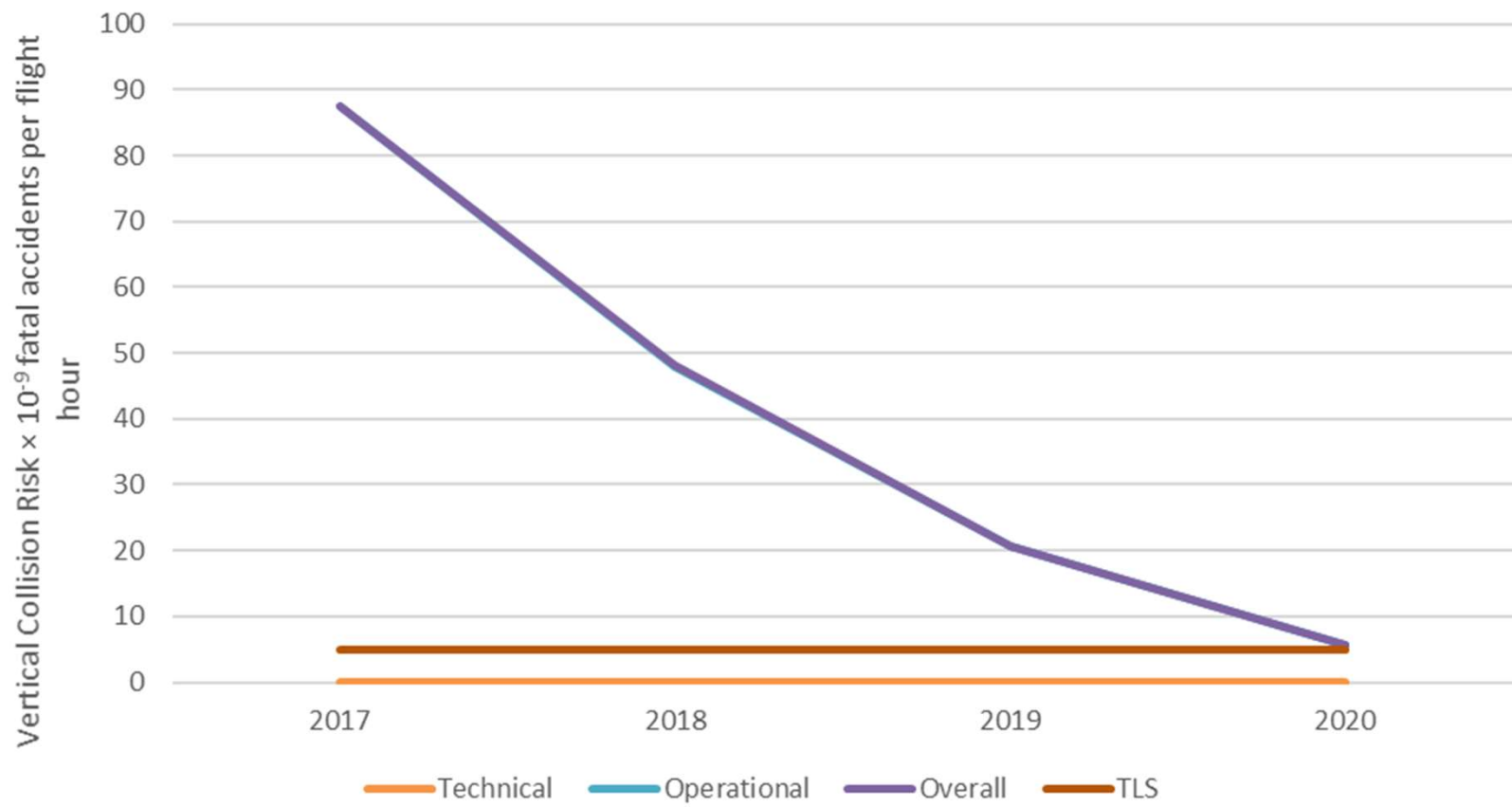
# 2020 Vertical Risk Estimates

Airspace	Technical	Operational	Overall
New York West	0.04	3.89	3.93
Miami Oceanic & San Juan	0.03	1.72	1.75
<b>Total</b>	<b>0.07</b>	<b>5.61</b>	<b>5.68</b>

*\*Risk estimates are  $\times 10^{-9}$  fapfh*



## Vertical Collision Risk Estimates by Year Miami Oceanic / New York West / San Juan Airspace



# Summary

- **The decrease in the vertical risk estimate is directly related to the decrease in the time spent at unexpected flight levels**
- **Reduced number of operations associated with the COVID-19 pandemic during calendar year 2020 was also a factor in the number of reported occurrences for 2020**

