

P/03 - GTE/23 IP/06

Vertical Safety Monitoring

Report

Mexico Airspace

CALENDAR YEAR 2022

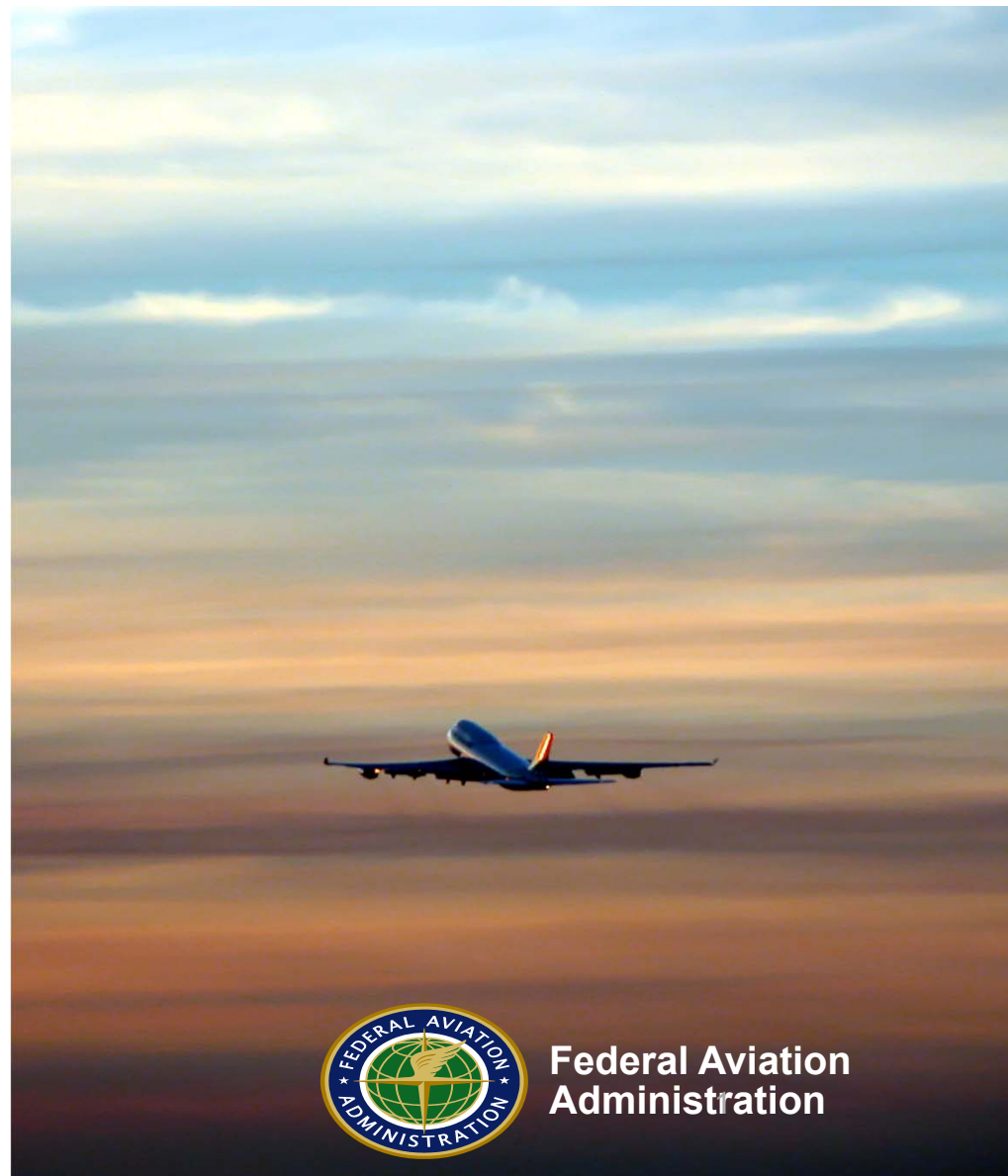
Presented to: GTE/23

By: NAARMO

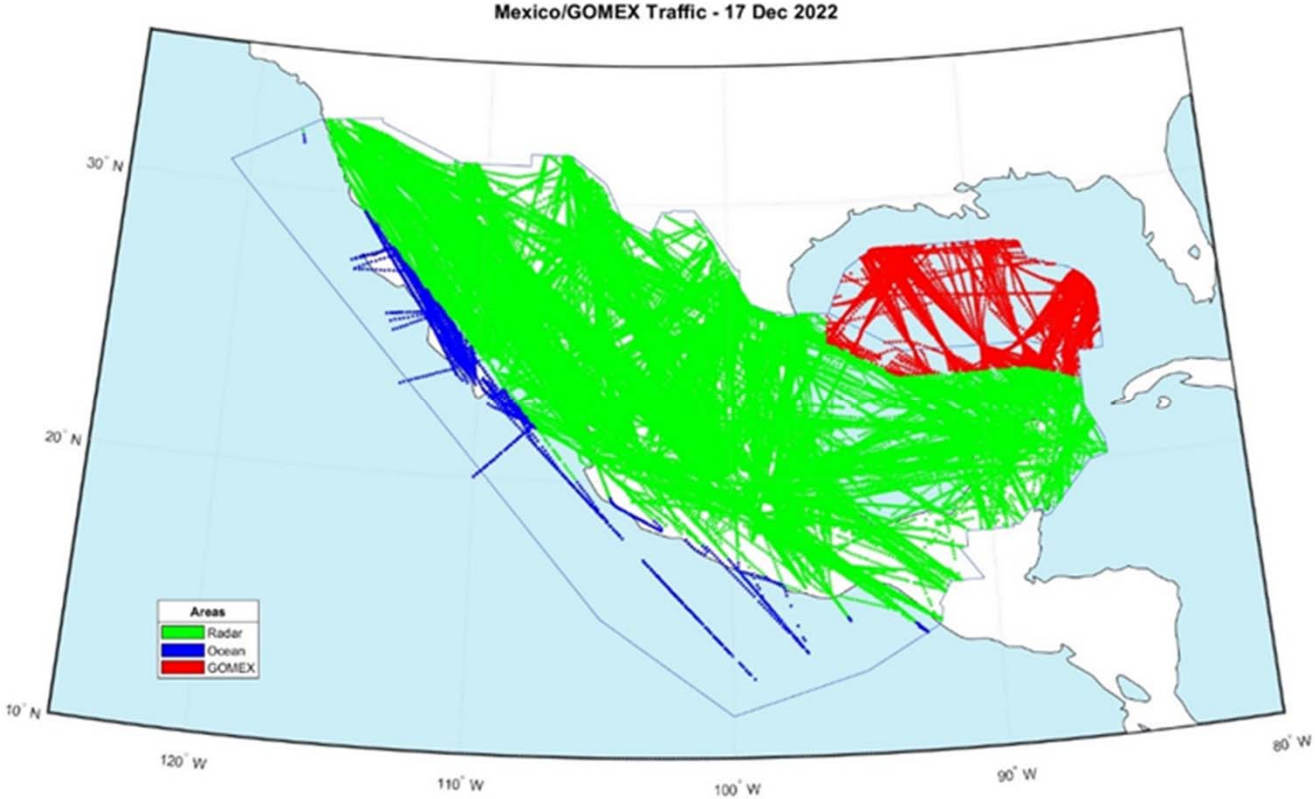
Date: 11-16 September 2023



**Federal Aviation
Administration**



Mexico Airspace Traffic Data





December 2022 traffic levels were 8% higher compared to December 2021

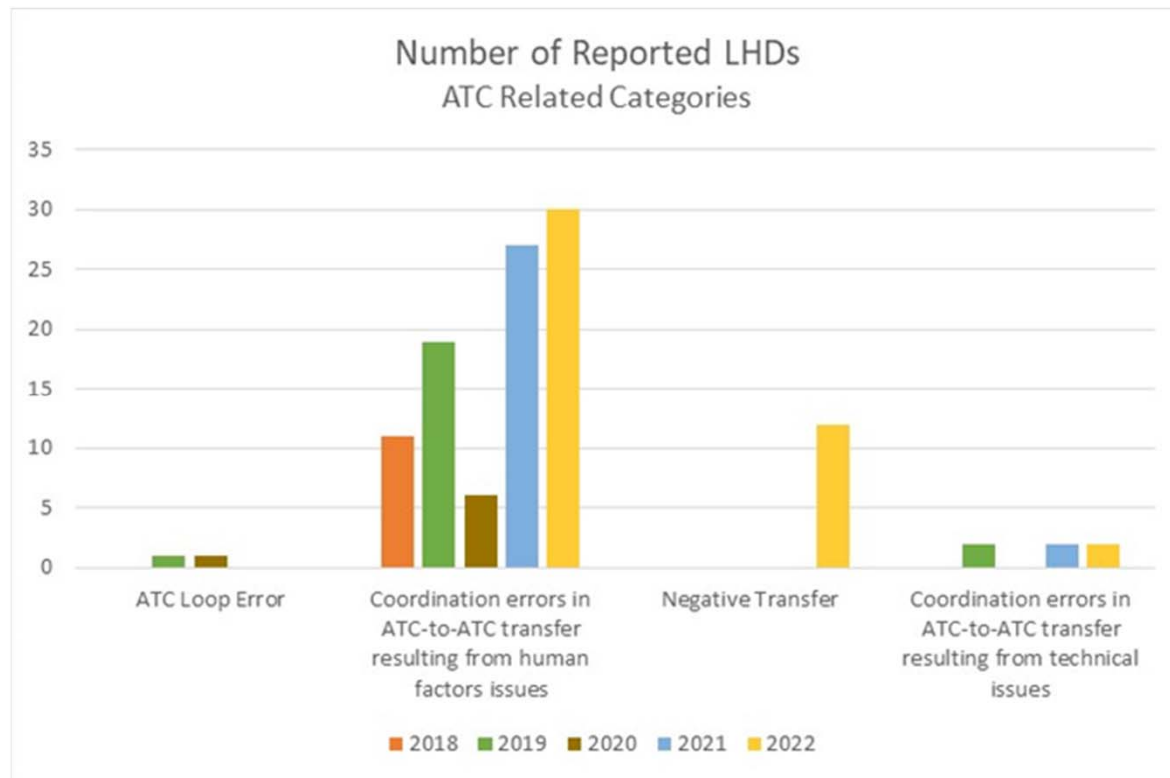


Reported LHDs by Category - 2022

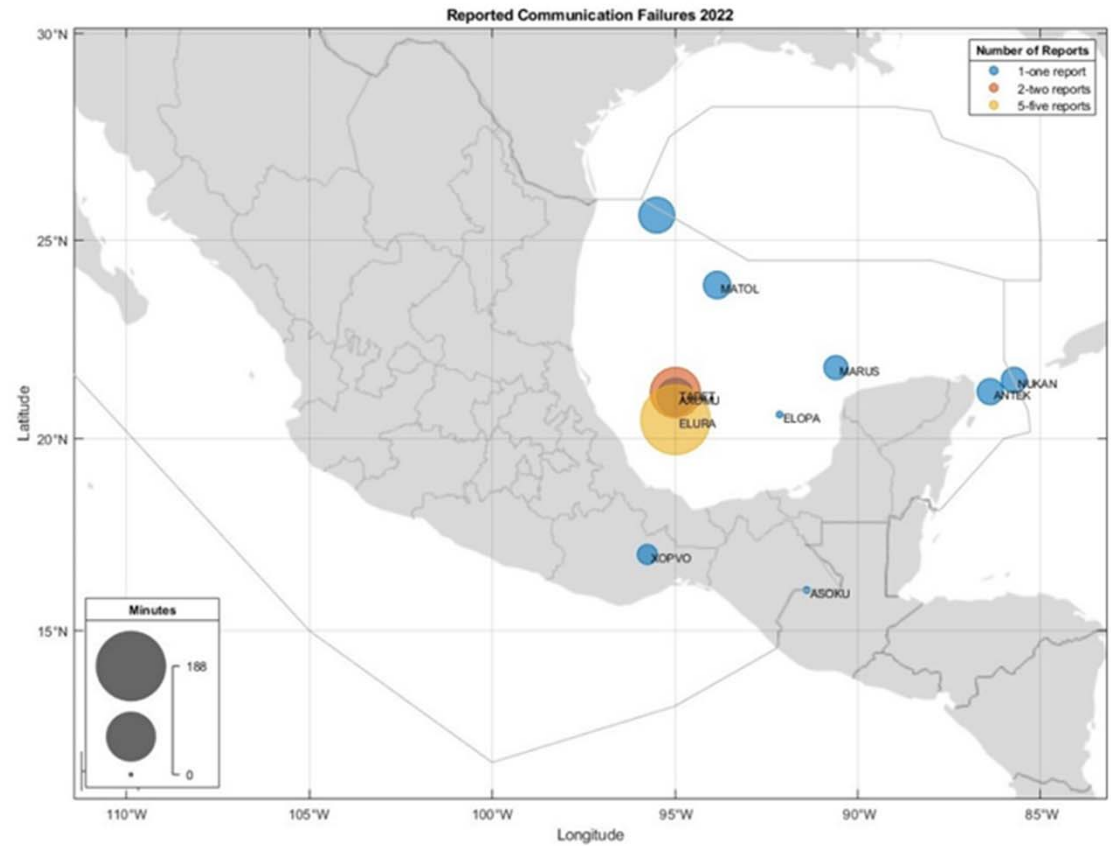
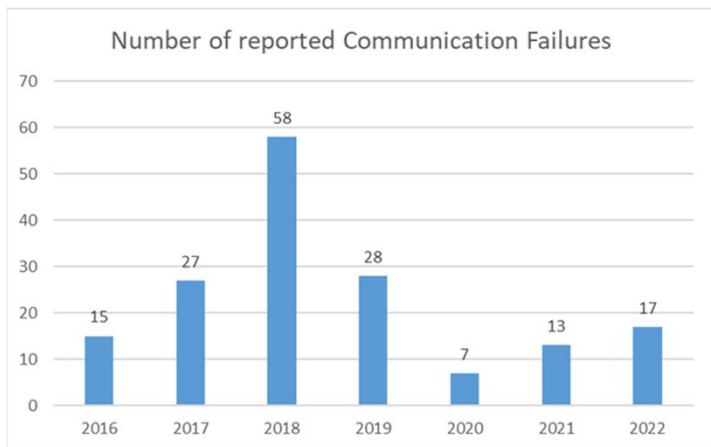
LHD Category Code	LHD Category Description	Number of LHD	Duration at Incorrect FL (min)	Number of FLs Crossed
B	Flight crew climbing/descending without ATC clearance	3	6	1
E1	Coordination errors in the ATC -to-ATC transfer of control responsibility as a result of human factors issues (incorrect FL, time or route)	30	38.5	0
E2	Negative coordination in the ATC-to-ATC transfer of control responsibility	12	28.5	0
F	Coordination errors in the ATC -to-ATC transfer of control responsibility as a result of an outage or technical issues	2	9	0
G	Aircraft contingency event leading to sudden inability to maintain assigned flight level (e.g. pressurization failure, engine failure)	1	0	10
	TOTALS	48	82	11



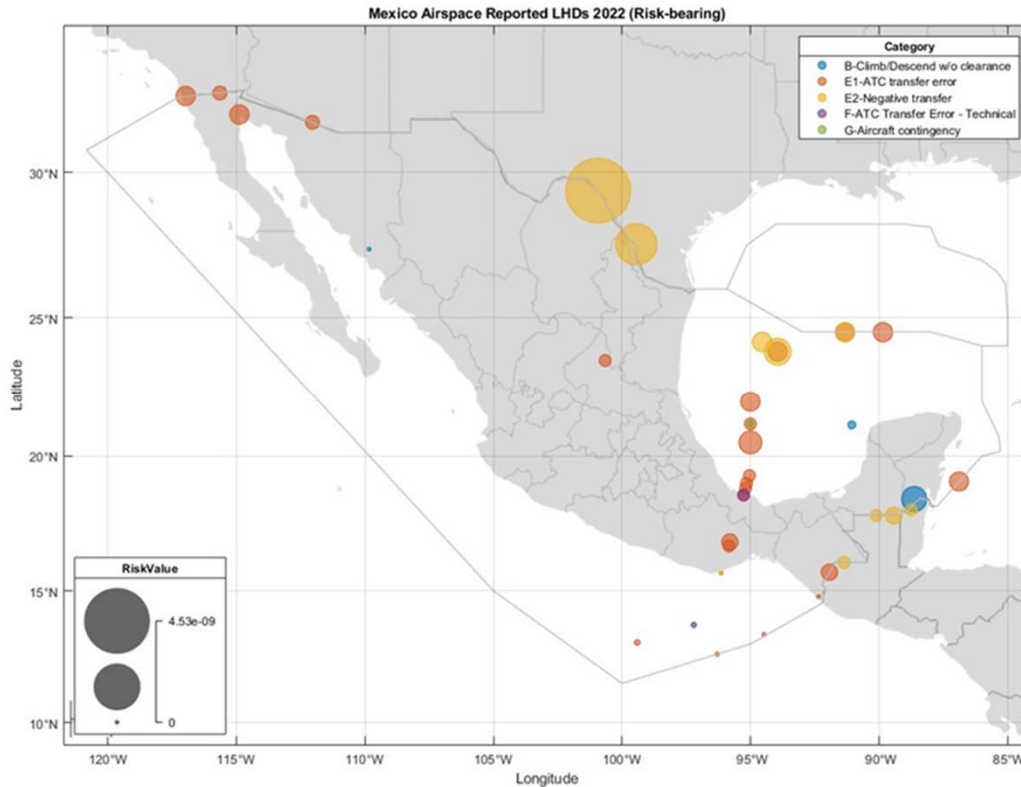
Reported LHDs



Reported Communication Failures



Vertical Risk Estimate



- **Mexico-USA Corridor**
 - Two category E2 LHDs
 - One LHD had 12.5 minutes duration, another LHD had 5 min duration
 - LOA between MTY and ZHU was revised effective 24 March 2022 (there have been no repeat occurrences between MTY-ZHU since)



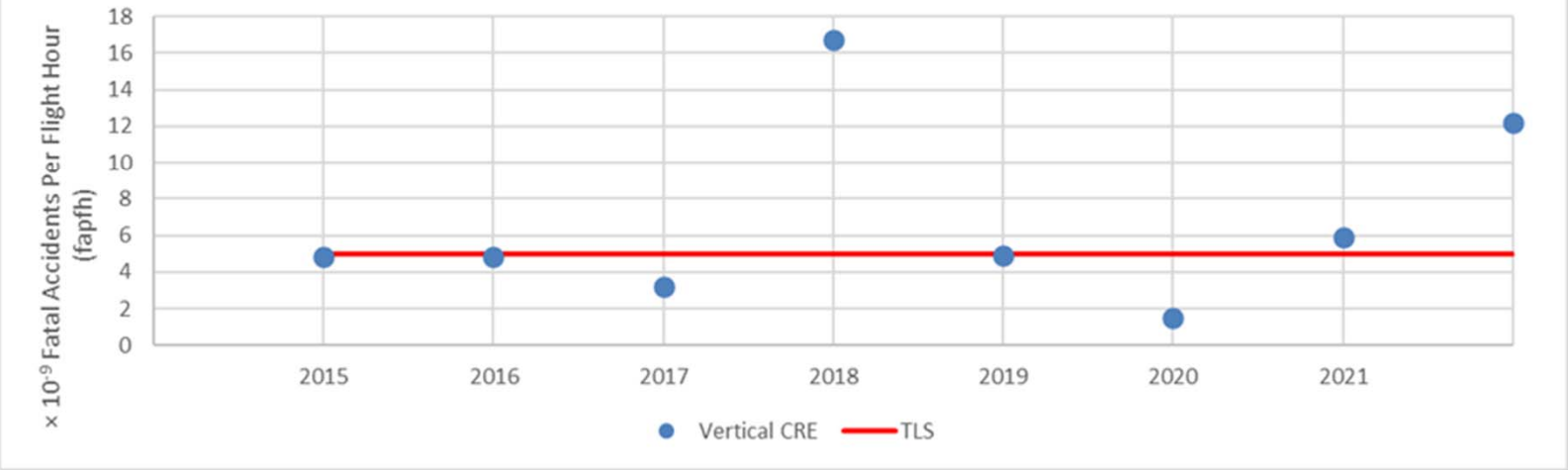
Summary by Airspace

Area	2022 Flying hours	Proportion of Traffic	Reported LHD duration (min)	Number of FLs crossed w/o clearance	Vertical Risk Estimate
GOMEX	334,820	21.22%	3	0	1.09
Offshore/Oceanic	15,618	0.99%	22.5	0	0.04
Mexico Domestic	1,093,708	69.31%	36	11	3.84
Mexico-USA Corridor	133,928	8.49%	20.5	0	7.24
TOTAL	1,578,075	100%	82	11	12.21



Vertical Risk Estimate Trend

Mexico Area RVSM Airspace
Vertical Collision Risk Estimates ($\times 10^{-9}$ fapfh)



Calendar Year	Vertical Collision Risk Estimate ($\times 10^{-9}$ fapfh)
2015	4.8
2016	4.8
2017	3.2
2018	16.7
2019	4.92
2020	1.51
2021	5.91
2022	12.21



Summary

- **The estimated vertical risk estimate for 2022 increased from previous year**
 - 2022 Vertical Risk Estimate for Mexico Airspace is 4.97×10^{-9} fapfh
- **This increase is directly related to the increase in the time spent at unexpected flight levels**
- **Future RVSM monitoring results for the CAR Region will include the airspace within this report**

