



**EASA**  
European Aviation Safety Agency

# Flight at High Altitude in Adverse Conditions

## Data Analysis

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# Scope

- What the data tells us
  - Worldwide accidents
  - European incident data
- Reporting of occurrences
  - Improvements to reporting under Regulation (EU) 376/2014
  - How to collect better information by type of event
- Improving safety communication



# Worldwide Accident Data

- Data for fixed wing commercial air transport between 2005 and 2014 (Past 10 years)
- Environmental and Weather during Cruise
  - Weather was a factor **11%** of fatal accidents (13)
  - Weather was a factor in **42%** of all accidents (149)
- Human cost
  - 604 fatalities in total
  - 187 serious injuries
  - 931 minor injuries

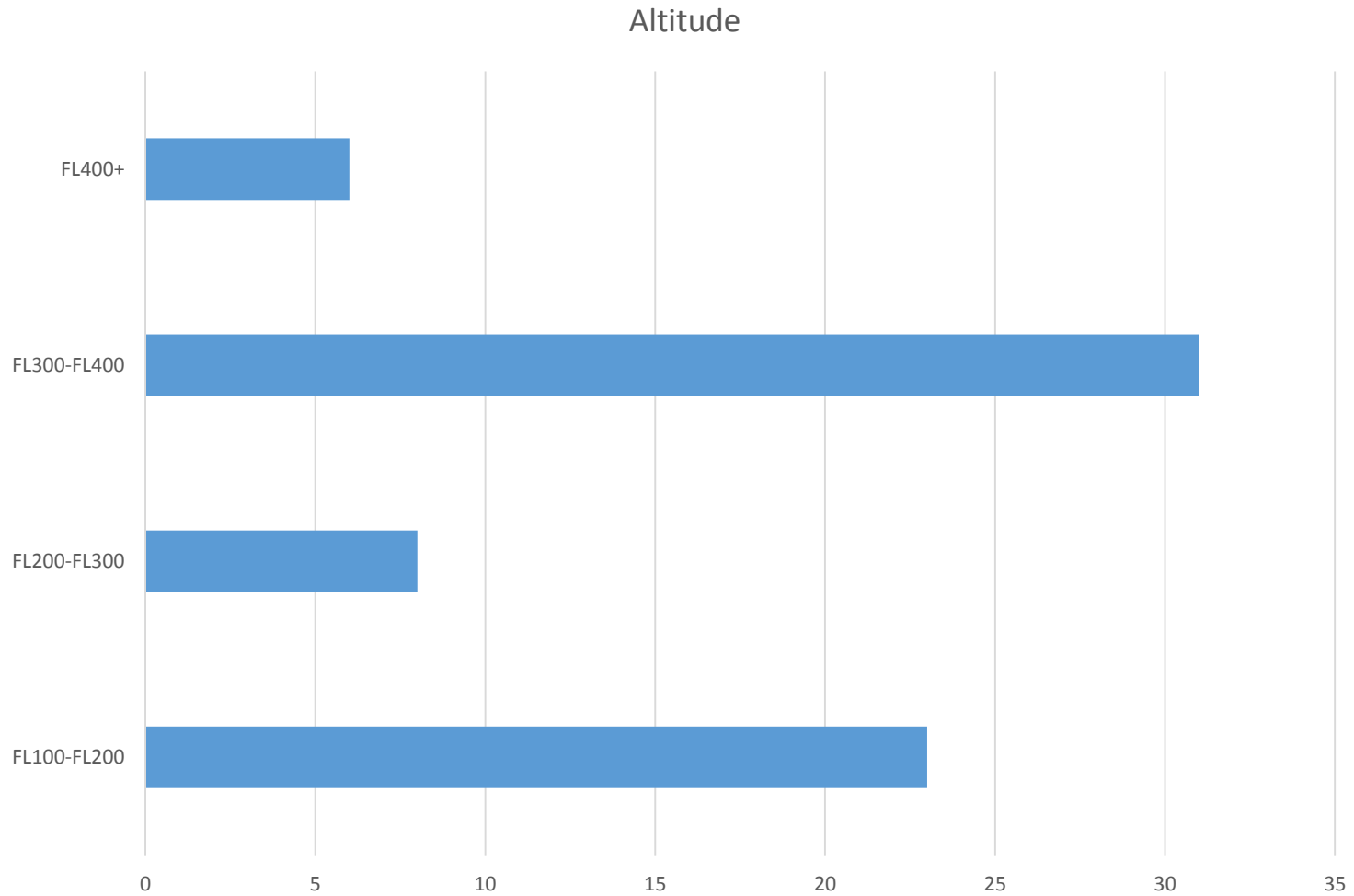


# Location Of These Occurrences





# Height/ FL





# Types of Flight Operations Events



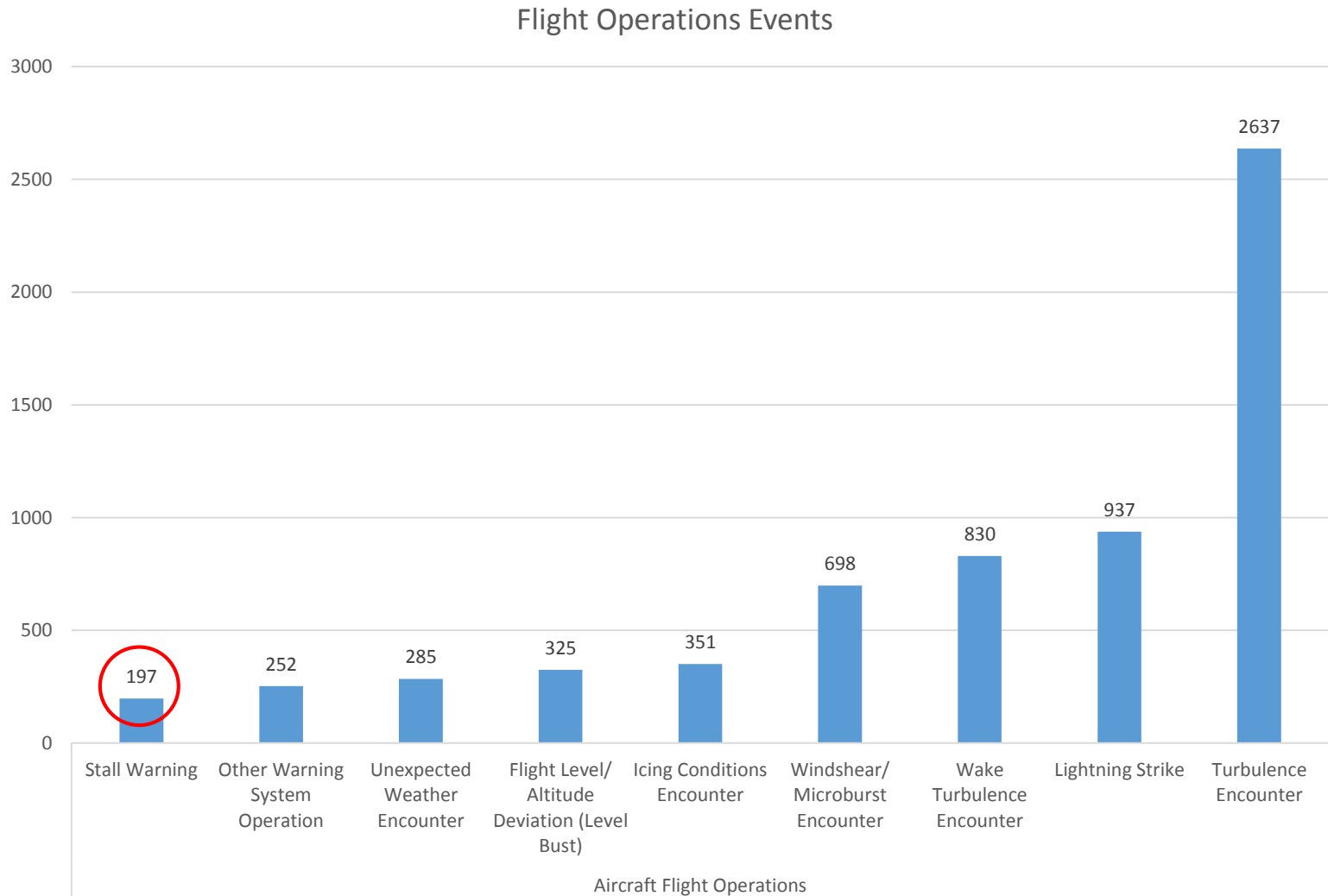


# European Occurrence Data

- Data from the European Central Repository for fixed wing commercial air transport between 2005 and 2014 (Past 10 years)
- Total number of occurrences for EASA AOC
  - 7,586 occurrences
  - 40 of which were accidents
  - 65 serious incidents
- Human cost
  - 344 fatalities in total
  - 55 serious injuries and 503 minor injuries



# Operational Events







# Outcomes of Cruise Flight Occurrences

- Loss of Control most frequent accident outcome
  - 26 Accidents and Serious Incidents led to loss of control
  - Resulting in 604 fatalities worldwide
  - 344 of those fatalities involved EASA AOC holders
- Turbulence injuries to Cabin Crew/ Passengers
  - 176 Serious injuries worldwide in last 10 years
  - 49 Serious injuries involving EASA AOC holders
- Lightning strike damage



# Further Analysis of LOC-I

- 36% of all LOC-I accidents occur in the enroute phase of flight
- Weather and environmental conditions is the most common factor in LOC-I accidents
- Icing conditions
  - Flight crew monitoring of equipment/ instruments
  - Deviation and incorrect application of procedures
- Turbulence and windshear
  - More frequent on larger aircraft suggesting challenges to secure the cabin



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# Questions?

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# Title presentation

## ➤ First level

### ➤ Second level

#### ➤ Third level

#### ➤ Fourth level

#### ▶ Fifth level





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