



Airworthiness and Safety Overview

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Airworthiness and Safety Oversight

- NASA Procedural Requirement 7900.3 requires that NASA understand/oversight the Flight Provider's airworthiness and safety processes
- This will be accomplished through a series of activities described in the following charts



Airworthiness and Safety Oversight

- The Flight Provider will be enrolled in the NASA Inter-center Aircraft Operations Panel (IAOP) review cycle
- NASA will conduct a tailored review of the Flight Provider's management, safety, maintenance and operations practices and documentation
 - An initial review will be conducted before commencing flight operations
 - The initial review results will be included in the presentation to the Airworthiness and Flight Safety Review Board
 - Biennial reviews will be conducted thereafter



Airworthiness and Safety Oversight

NASA IAOP Review Checklist Version 2.0

**NASA AIRCRAFT DIVISION
INTERCENTER AIRCRAFT OPERATIONS PANEL
REVIEW CHECKLIST**

- A. MANAGEMENT
- B. OPERATIONS
- C. MISSION MANAGEMENT FLIGHT OPERATIONS *
- D. AIRWORTHINESS/FLIGHT READINESS
- E. AVIATION SAFETY
- F. HAZARD ANALYSIS
- G. AIRFIELD FACILITIES
- H. MAINTENANCE FACILITIES
- I. AIRCRAFT MAINTENANCE
- J. MAINTENANCE TRAINING
- K. AVIONICS, INSTRUMENTATION,
ELECTRONICS, AND ELECTRICAL
- L. QUALITY ASSURANCE (QA) AND INSPECTION
- M. AVIATION LIFE SUPPORT SYSTEMS
- N. SECURITY
- O. UNMANNED AIRCRAFT SYSTEM *

- Example IAOP checklist

* example of tailored items for IAOP review of Microgravity Flight Services Flight Provider



Airworthiness and Safety Oversight

- The Flight Provider will present their airworthiness and flight approval processes and approach to a NASA Airworthiness and Flight Safety Review Board
 - AFRC Chief Engineer (Chair)
 - Deputy Center Director (Alternate Chair)
 - Director, Research and Engineering (R)
 - Director, Flight Operations (O)
 - Director, Mission Information and Test Systems (M)
 - Director, Programs (XP)
 - Appropriate Projects Mission Director
 - *Aeronautics (PA), Exploration (PE), Reimbursable (Z), Science (PS)*
 - Director, Safety and Mission Assurance (S)
 - Chief Pilot (OF)
 - Aviation Safety Officer
 - Ex-Officio members from outside organizations as Required

(Quorum = Chair, O (Pilot), R and S (ASO))



Airworthiness and Safety Oversight

- NASA will provide ex-officio members to the Flight Provider's...
 - Airworthiness process
 - Safety reviews (Test Readiness Reviews, Experiment Safety Reviews, Human Research and Institutional Reviews, Day of Test Reviews (Crew Brief), etc.)
- Campaign by campaign reviews will be conducted of air crew make up, training and qualifications
- Periodic inspections will be conducted of the aircraft maintenance and records



Experiments

- The Experiment Provider
 - Will conduct an internal safety review of all provided instruments/experiments for compliance with their organizational safety requirements
 - Will support the Flight Provider's experiment airworthiness and safety processes by providing data, documentation and/or analysis required to complete the Flight Provider's experiment airworthiness and safety acceptance
 - Conduct internal Human Research and Institutional Review for any experiments including human subjects and provide results to the Flight Provider



Questions?

Please record them on a Question Sheet