

NASA GSFC Airborne Science Flight Operations Standards

1. Minimum Operating Standards For All Aircraft Operations

Operations

- PIC – Airline Transport Pilot (ATP) Certificate
- SIC – Commercial Pilots Certificate with an instrument rating
- All pilots in previous year - 100 hrs TT & a satisfactory proficiency flight check
- All pilots in previous 90 days – 3 Takeoffs & Landings (Night if night ops)
- Continuous radio capability with a ground station for flight following
- Life raft which holds all for extended overwater ops (50NM from land)
- Aircraft performance – positive climb gradient with engine loss
- Alcohol use policy – 10 hours prior & not under the influence
- Flight plans will be filed for all flights with appropriate ATC

Maintenance

- Aircraft History - date of manufacture, registration #, & total time
- Copy of Aircraft Registration & Airworthiness Certificate
- Copy of Current Weight & Balance
- Copy of last Airframe and Powerplant Inspection
- FAA Form 337 or other documentation on any modifications
- FAA Form 337 or other documentation on any equipment installations
- Documentation showing compliance with all Airworthiness Directives
- List personnel authorized to perform aircraft maintenance & their qualifications
- List personnel authorized to return aircraft to service & their qualifications

2. Other standards requiring justification/management approval for deviation from

Operations

- Non-turbine or Single pilot aircraft operations
- PIC without 200 hours in make/model
- PIC without – ATP, 500ME, 2500TT, 200Inst, 50 Night, 40(10 make/model) last 90 days
- SIC without – Comm w/inst, 700TT, 100Inst, 50 Night, 30(10 make/model) last 90 days
- Pilots without – 6 T/Os & Ldgs (Night if night ops), 3 instr appr/3 instr hrs in last 90 days
- No GPWS or radar altimeter for flight below 2000 feet (except for t/o & land)
- No ELT for remote (outside of VHF range from ground station) operations
- Crew Duty over 12 hours (14hrs if none midnight-4AM) & crew rest less than 12 hours
- Crew flight time limits greater than 8 hours a day or 40 hours a week
- Flights in close proximity to known or forecast severe weather
- No filed alternate landing site with destination weather below 5000/5
- No operating weather radar for other than day VFR flights

Maintenance

- Any deviations from manufacturers' overhaul & replacement schedule

3. Documentation to be reviewed for all flight operations

- Description of company that owns/operates the aircraft with contact info
- Description of company personnel by position & organization chart
- Training & medical records - Initial & recurrent for crewmembers & maintenance personnel
- List of aircraft radios, navigation equipment, & survival gear
- Company operations rules – include Min runway length, Min fuel, Min Wx for T/O, Ldg, & Alt, and drug & alcohol testing policy along with aviation safety program/policy.
- Copy of Contract or Letter of Agreement
- Project Documentation– Description of project including NASA project manager contact info, project objectives, payload description, list of personnel & equipment onboard during flight and:
 - Flight plan – include airports, route of flight, op area, other aircraft involved
 - Safety plan – list of possible ground & flight hazards and risks including safety controls
 - Flight Readiness Review Briefing – brief to mgmnt on readiness of maint, ops, & project