NASA RVSM Certification Process
High Level Overview

17-19 October, 2017
2017 ASE Workshop
FAA Tech Center, Atlantic City
Reduced Vertical Separation Minimum (RVSM)

RVSM reduces standard separation between FL290 and FL410 from 2000 feet to 1000 feet

NASA Public Use aircraft (non-RVSM) are allowed access to RVSM airspace on workload permitting basis only
NASA is a US Government Federal Agency, often operates as “public use” instead of civil aircraft.

- Civil when carrying passengers
- “State aircraft” when flying internationally

NASA’s airworthiness self-approval stems from the Space Act of 1958

- Each NASA Center has an engineering technical authority that oversees airworthiness
- Independent peer review consisting of engineering design and hazard/risk analysis
- Airworthiness approval through Center Director authorized delegate

RVSM Airworthiness and Operational approval process

- Uses FAA AC 91-85 RVSM Authorization of Aircraft and Operators as process to follow
- NASA Requirements documents include:
  - Aircraft performance and equipment requirements
  - Continued airworthiness maintenance requirements
  - Operational procedures and training requirements
- Height monitoring compliance
- Final approval by Center Airworthiness Review Process
Height Monitoring

- **Initial RVSM Certification Height Monitoring**
  - EGMU Height monitoring flights
  - Trailing cone
    - SSEC development

- **Continued Monitoring**
  - 12 month ground checks
  - AGHME site over flights
  - 24 month height monitoring EGMU flights
NASA Department of Defense (DoD)-based aircraft such as the T-38(N) have operated under a memorandum of understanding between the Federal Aviation Administration (FAA) and the DoD regarding RVSM

- Single altimetry system on T-38(N)

RVSM NASA Aircraft carrying external payloads

- Engineering assessment required, may result in:
  - Additional testing required for flight in RVSM airspace
  - Restricted envelope
  - Or non-RVSM operation
AGHME (Aircraft Geometric Height Measuring Element) Process for NASA aircraft
- Which database with NASA aircraft reside in
- Process for providing NASA with agency aircraft information on a monthly basis

NASA RVSM Certification notification to international RMAs
To all those at the FAA who have supported NASA T-38 pilot static calibration and RVSM verification flights over the past several years,

THANK YOU!!!

1st NASA T-38 RVSM Flight
February 1, 2016
N95NA GV – RVSM Certified
N525NA Dassault Fanjet Falcon 20G – RVSM Certified
SOFIA – RVSM Certified