

## **Altimetry System Error (ASE) Workshop**

**17-19 October 2017**

### **Executive Summary**

The Federal Aviation Administration's (FAA) Separation Standards Analysis Branch, ANG-E61 and Eurocontrol hosted an Altimetry System Error (ASE) Workshop at the William J. Hughes Technical Center October 17-19, 2017. The effort was conducted under USA/EUROPE via a Memorandum of Cooperation FAA-Eurocontrol Cooperative Research Agreement Action Plan 03 (AP03): Air Traffic Modeling Separation Standards. The workshop was attended by airlines including, Southwest; aircraft manufacturers including Airbus, Boeing, Cessna, Cirrus and Embraer, and sensor manufacturers including, UTAS, Honeywell, and Aeromech. Other government attendees included FAA Flight Standards, members of the U.S. Navy RVSM team, and representatives from NASA.

The group was welcomed to the center by James Connett, Center Operations Division Manager. Mr. Joseph Sultana, a previous Eurocontrol Reduced Vertical Separation Minimum (RVSM) Program Manager and now the Director of the Eurocontrol Network Management Directorate, then provided a perspective on the continuing need for RVSM monitoring.

The workshop continued with discussion and presentations of Regional Monitoring Agency (RMA) functions, beginning with ANG-E61, and continuing with EUR RMA, CARSAMMA, NATCMA. The presentations provided an in-depth view of the technical and analytical work performed with respect to monitoring, tracking and reporting ASE performance of aircraft groups and individual airframes. The presentations touched on the roles and responsibilities as mandated by International Civil Aviation Organization (ICAO).

A presentation on the use of Automatic Dependent Surveillance–Broadcast (ADS-B) to support RVSM operations was provided by FAA Flight Standards, AFS-470. The details of the FAA rulemaking effort were reviewed. The rule provisions, which eliminate the requirement for operators to make application to the FAA for RVSM operations under a specific set of conditions that include ADS-B equipage were identified. The relative benefits to operators and challenges to RMAs were discussed.

The workshop continued with technical presentation on requirements, ASE performance monitoring and tracking, data processing and quality control measures, and large ASE reporting processes and resolution. The purpose of the presentations was to inform participants of contributing factors to large ASE performance, detail the large ASE detection process for each case, solicit feedback of possible solutions for unresolved cases, stimulate conversation between operators, manufacturers, service providers and regulatory authorities, provide experiences gained from resolution collaboration with relevant parties and share lessons learned.

A session on State aircraft was provided to give the participants insight into the process by which other Government agencies approve aircraft for RVSM operations. Presentations were provided by the U.S. Navy and NASA that addressed their approval practices.

The workshop included two breakout sessions, Ground Monitoring and Weather Data. The sessions were designed to address target areas of interest of all participants. The intent of each workshop was to address each subject area at a more refined level and to engage participants in a working group type of environment.

This second workshop hosted by the FAA in North America was very successful in providing information to the community of interest, particularly in getting direct participation by U.S. industry. All participants expressed a desire for a follow-on workshop within approximately two years, the details of which will be worked by FAA and Eurocontrol.