NASA SBIR 2015 Phase I Solicitation

A3.03 Future Aviation Systems Safety

Lead Center: ARC

Participating Center(s): LaRC

The Aeronautics Research Mission Directorate (ARMD) will be concluding the successful Aviation Safety Program (AvSP). The newly expanded Airspace Operations and Safety Program (AOSP) will be succeeding AvSP's significant achievements and stepping up to lead the ARMD research in the area of Real-Time System-Wide Safety Assurance (RSSA). As currently envisioned, ARMD sees its future, safety-related research focused in a forward looking, more comprehensive system-wide direction. Rather than be focused on the current National Airspace System (NAS), ARMD's RSSA will be focused towards a future NAS where a gate-to-gate trajectory-based system capability exists that satisfies a full vision for NextGen and beyond. The ultimate vision for RSSA would enable the delivery of a progression of capabilities that accelerate the detection, prognosis and resolution of system-wide threats. Proposals under this sub-topic are sought, but not limited to, these areas:Â

- Research and development products to address technologies, simulation capabilities and procedures for reducing flight risk in areas of attitude and energy aircraft state awareness
- Develop V&V tools and techniques for assuring the safety of air traffic applications during certification and throughout their lifecycles, and, techniques for supporting the real-time monitoring of safety requirements during operation.
- Develop and demonstrate prognostic decision support tools and methods capable of supporting real-time safety assurance.