



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

December 27, 2016

The Honorable John Thune
Chairman, Committee on Commerce,
Science, and Transportation
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

As directed in the FAA Modernization and Reform Act of 2012 (P.L. 112-95), Section 907, I am pleased to provide you with a report on the Federal Aviation Administration Centers of Excellence (COE) program for Fiscal Year (FY) 2015.

The FY 2015 Annual Report include both contract and matching grant awards for all active COEs. FAA funding awarded, matching amounts provided, and sources of matching contributions are included for the following FAA COEs:

- Unmanned Aircraft Systems – Selected: 2015
- Alternative Jet Fuels & Environment – Selected: 2013
- General Aviation Safety – Selected: 2012
- Commercial Space Transportation – Selected: 2010
- Advanced Materials – Selected: 2004
- Cabin Environment & Intermodal Research – Selected: 2004
- Aviation Noise & Emissions Mitigation – Selected: 2003
- General Aviation Research – Selected: 2001

We have sent identical letters to Chairman Smith, Senator Nelson, and Congresswoman Johnson.

Sincerely,

Michael P. Huerta
Administrator

Enclosure



U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

December 27, 2016

The Honorable Lamar S. Smith
Chairman, Committee on Science,
Space, and Technology
House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

As directed in the FAA Modernization and Reform Act of 2012 (P.L. 112-95), Section 907, I am pleased to provide you with a report on the Federal Aviation Administration Centers of Excellence (COE) program for Fiscal Year (FY) 2015.

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Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

December 27, 2016

The Honorable Bill Nelson
Committee on Commerce,
Science, and Transportation
United States Senate
Washington, DC 20510

Dear Senator Nelson:

As directed in the FAA Modernization and Reform Act of 2012 (P.L. 112-95), Section 907, I am pleased to provide you with a report on the Federal Aviation Administration Centers of Excellence (COE) program for Fiscal Year (FY) 2015.

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We have sent identical letters to Chairmen Thune and Smith and Congresswoman Johnson.

Sincerely,

Michael P. Huerta
Administrator

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Office of the Administrator

800 Independence Ave., S.W.
Washington, D.C. 20591

December 27, 2016

The Honorable Eddie Bernice Johnson
Committee on Science, Space, and
Technology
House of Representatives
Washington, DC 20515

Dear Congresswoman Johnson:

As directed in the FAA Modernization and Reform Act of 2012 (P.L. 112-95), Section 907, I am pleased to provide you with a report on the Federal Aviation Administration Centers of Excellence (COE) program for Fiscal Year (FY) 2015.

The FY 2015 Annual Report include both contract and matching grant awards for all active COEs. FAA funding awarded, matching amounts provided, and sources of matching contributions are included for the following FAA COEs:

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Sincerely,

Michael P. Huerta
Administrator

Enclosure

FAA Air Transportation Center of Excellence Congressional Report

Attachment

FY 2015

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Congressional Report – FY 2015 Narrative

FAA Air Transportation Centers of Excellence Program Fiscal Year (FY) 2015 Overview

The FAA recognizes the critical need to develop the nation's technology base while educating the next generation of aviation professionals. Following a rigorous open dialogue and competitive process, the FAA Administrator selects a university team to serve as a Center of Excellence (COE) in individual mission-critical topics. The COEs are established through cooperative agreements with the nation's premier universities, and their members and affiliates, who conduct focused research and development and related activities over a period of 10 years.

In compliance with Public Law 101-508, the FAA has entered into cooperative agreements with competitively selected COEs established with academic institutions and their industry affiliates throughout the United States. The COE members have assisted in mission-critical research and technology areas that have focused on the following topics:

- unmanned aircraft systems
- alternative jet fuels and environment
- general aviation safety, accessibility and sustainability
- commercial space transportation
- advanced materials
- airliner cabin environment and intermodal transportation research
- aircraft noise and aviation emissions mitigation
- general aviation
- airworthiness assurance
- operations research
- airport technology
- computational modeling of aircraft structures

The COE program facilitates collaboration and coordination between government, academia, and industry to advance aviation technologies and expand FAA research capabilities through congressionally required matching contributions. COE members match FAA grant awards, dollar-for-dollar, with contributions from nonfederal sources, and may also provide additional contributions through cost-share contracts. Over the life of the program, the COE universities with their nonfederal affiliates have provided more than \$250 million in matching contributions to augment FAA research efforts.

Through these long-term cost-sharing activities, the government and university-industry teams leverage resources to advance the technological future of the nation's aviation industry while educating and training the next generation of aviation scientists and professionals.

Four of the centers, Computational Modeling of Aircraft Structures, Aviation Operations Research (NEXTOR), Airworthiness Assurance (AACE) and Airport Technology Research (CEAT), have satisfied their requirements. Currently, the COEs for Operations Research and Airport Technology serve as self-sufficient resources for the aviation community.

During FY 2015, the FAA COE Program Management Office (PMO) awarded \$22,293,059 in support of 191 FAA projects, negotiated and executed 24 COE cooperative agreements, issued 236 grant awards, executed 48 other COE actions, and generated more than \$25 million in matching contributions from industry and other nonfederal sources.

Post-award activities included the conduct of a successful 10-year evaluation for the Joint COE for Advanced Materials and a five-year evaluation of the COE for Commercial Space Transportation (CST). The successful five-year COE CST evaluation resulted in the Administrator's concurrence with the request to continue the COE for CST into Phase II. Thereafter, the FAA negotiated and executed nine COE CST Phase II cooperative agreements with the core members, and the COE added seven new unfunded affiliate members.

Additionally, the FAA completed a competition to establish the COE for Unmanned Aircraft Systems (UAS) and finalized significant pre-award activities in preparation for the establishment and funding of a new COE in September, 2015. The pre-award competitive process culminated in the submission of proposals representing more than 75 universities throughout the U.S. and their industry and other affiliates which was followed by the conduct of a technical evaluation of the submissions, and a management and fiscal review of the best qualified proposals. The process enabled the FAA Administrator to select the new COE UAS team in FY 2015, on schedule, as planned. The FAA COE Program Office negotiated and entered into 15 new cooperative agreements with the 15 COE UAS core universities and Mississippi State University serving as the Lead.

In March of 2015, the FAA Administrator concurred with a request submitted by the Air Traffic Organization (ATO) to begin a competition for a new COE for Technical Training and Human Performance (TT/HP). The FAA initiated plans to begin the competitive process to establish the COE with the ATO, and developed and published a Draft Solicitation prior to the public meeting conducted on October 21-22, 2015 in Arlington, VA. The COE PMO is currently planning to accept proposals, conduct a technical evaluation and management and fiscal review, with the expectation that the new COE for TT/HP will be selected, established and funded in FY 2016.

The FAA commits to base funding in support of research and related COE activities over a period of 10 years and allows for an additional two-year period to assure orderly close out of all activities. Thereafter, the FAA intends for each public-private partnership to meet COE requirements and become a self-sufficient national aviation resource. Recognized for their developed expertise, COE members are expected to generate funding and be able to compete for and conduct research activities for the aviation community as needed. By becoming self-sufficient, the COE university members may also continue to support the FAA. However, after 10 years, the agency no longer commits to annual base funding levels and the COE universities may conduct research that is fully funded by the agency as well as other entities.

In addition to completing the competition to establish a COE for UAS and initiating the competitive process to establish a new COE for TT/HP, in fiscal year 2015, the FAA supported seven active public-private partnerships throughout the U.S. with academic institutions and their industry and other affiliates. These are:

- COE for Unmanned Aircraft Systems
- COE for Alternative Jet Fuels and Environment
- COE for General Aviation Safety, Accessibility and Sustainability
- COE for Commercial Space Transportation
- Joint COE for Advanced Materials
- COE for Cabin Environment and Intermodal Transport Research
- COE Partnership for Air Transportation Noise and Emission Reduction

Narratives follow for each COE Center.

This report contains an Attachment with Appendices (A through G) that list the grants awarded to the current university members of each COE.

For more information, see: <http://www.faa.gov/go/coe>

Attachments:

- Appendix A - COE for Unmanned Aircraft Systems
- Appendix B - COE for Alternative Jet Fuels and Environment
- Appendix C - COE for General Aviation Safety, Accessibility and Sustainability
- Appendix D - COE for Commercial Space Transportation
- Appendix E - Joint COE for Advanced Materials
- Appendix F - COE for Cabin Environment and Intermodal Transport Research
- Appendix G - COE Partnership for Air Transportation Noise and Emission Reduction

COE for Unmanned Aircraft Systems

On May 8, 2015, FAA Administrator Michael Huerta announced the selection of the COE for UAS (ASSURE). The research efforts of this COE focus on the following topic areas: Air Traffic Control Interoperability, Airport Ground Operations, Control and Communication, Detect and Avoid (DAA), Human Factors, Low Altitude Operations Safety, Noise Reduction, Spectrum Management, UAS Crew Training and Certification Including Pilots, UAS Traffic Management, UAS Wake Separation Standards for UAS Integration into the NAS.

Under the leadership of Mississippi State University, the following universities serve on this COE core team: Drexel University, Embry-Riddle Aeronautical University, Kansas State University, Montana State University, New Mexico State University, North Carolina State University, Ohio State University, Oregon State University, University of Alabama-Huntsville, University of Alaska-Fairbanks, University of California-Davis, University of Kansas, University of North Dakota, Wichita State University. Associate members include: Auburn University, Concordia, Indiana State University, Louisiana Tech University, Southampton and Tuskegee University.

The FAA is also planning to fund this COE through a cost-share contract for tasks to be completed for the sole benefit of the agency. In FY 2015, the FAA funded 25 grant projects, and awarded \$4,763,506 to 12 of the 15 COE members to begin Phase I of this research partnership. The COE currently reflects a \$9.4 million level-of-effort as members are matching grant awards dollar-for-dollar from non-federal sources in keeping with congressional requirements.

For additional information, see: <http://www.assureuas.org>

COE for Alternative Jet Fuels and Environment

On September 13, 2013, U.S. Secretary of Transportation Anthony Foxx announced the selection of the COE for Alternative Jet Fuels and Environment (ASCENT). The R&D efforts of this COE address the following major topic areas related to alternative jet fuels: feedstock development, processing and conversion research, regional supply and refining infrastructure, environmental benefits analysis, aircraft component deterioration and wear assessment, and fuel performance testing. Areas relating to environmental issues are: aircraft noise and impacts, aviation emissions and impacts, aircraft technology assessment, environmentally and energy efficient gate-to-gate aircraft operations, and aviation modeling and analysis.

Under the leadership of Washington State University and the Massachusetts Institute of Technology serving as Co-Lead, the following universities also serve on this team: Boston University, Georgia Tech Research Corporation, Missouri University of Science and Technology, Oregon State University, Pennsylvania State University, Purdue University, Stanford University, University of Dayton, University of Hawaii, University of Illinois, University of North Carolina, University of Pennsylvania, University of Tennessee, and University of Washington. The FAA supported 83 projects and awarded \$10,598,441 to the 16 member universities in FY 2015. The COE members generated \$11 million in matching contributions from non-federal sources.

For additional information, see: <http://ascent.aero/>

COE for General Aviation Safety, Accessibility and Sustainability

On September 27, 2012, U.S. Secretary of Transportation Ray LaHood announced the selection of the new COE for General Aviation - The Partnership to Enhance General Aviation Safety, Accessibility and Sustainability (PEGASAS). Fully operational in 2013, this COE has focused on the following GA topic areas: flight safety; communication, navigation and surveillance; human factors; weather; airport technology; propulsion and structures; continued airworthiness; and system safety management.

Under the leadership of Purdue University, the following universities serve as core members of the team: Florida Institute of Technology, Georgia Institute of Technology, Iowa State University, The Ohio State University and Texas A&M University. The FAA supported 35 projects, awarded \$3,092,624 to the six (6) member universities in FY 2015 while the COE generated more than \$3 million in matching contributions from nonfederal sources.

For additional information, see: <https://www.pegasas.aero/>

COE for Commercial Space Transportation

On August 18, 2010, U.S. Secretary of Transportation Ray LaHood announced the selection of the COE for Commercial Space Transportation. The R&D efforts of the COE address four major areas: space launch traffic management and launch operations; launch vehicles, operations, technologies and payloads; human spaceflight; and industry viability, including commercial, policy, international, legal, and regulatory viability.

In 2015, the FAA closed out the COE CST Phase I cooperative agreement and conducted a successful evaluation. With the transition to Phase II, the University of Texas – Galveston currently serves as the Administrative Lead for this COE with new affiliates and eight core university members which include: New Mexico State University, New Mexico Institute of Mining and Technology, Florida Institute of Technology, Florida State University, Stanford University, University of Central Florida, University of Colorado and University of Florida.

The COE added seven additional non-funded affiliate members who work collaboratively to augment FAA research and provide matching contributions; the affiliates currently include: McGill University, Baylor College of Medicine, MITRE, Embry-Riddle Aeronautical University, the National Aerospace Training and Research Center (NASTAR) Center, Satwest-Satellite Communications and Aerospace, and the University of Nebraska Lincoln.

The FAA supported 58 COE tasks awarding \$1,272,864 of grants through cooperative agreements with the nine (9) member universities. Since its inception, the FAA has awarded \$7.5 million in grants, and the COE core universities with their affiliates have provided matching contributions in excess of \$12.5 million. Nine new COE cooperative agreements were negotiated and executed in 2015 and the FAA Administrator concurred with the request to enable the COE members to begin a Phase II five-year period through 2020.

For additional information, see: <http://www.coe-cst.org/>

Joint COE for Advanced Materials

In 2003, FAA Administrator Marion Blakey selected the Joint COE for Advanced Materials (JAMS) with the University of Washington and Wichita State University as the Lead members. This COE conducts R&D on material standardization and shared databases, bonded joints, structural substantiation, damage tolerance and durability, maintenance practices, advanced material forms and processes, cabin safety, life management of materials, and nanotechnology for composite structures.

Member universities include: Edmonds Community College, Florida International University, Northwestern University, Oregon State University, Purdue University, and University of California at Los Angeles, University of Delaware, University of Utah, Tuskegee University and the Washington State University.

In FY 2015, the FAA awarded \$2,429,612 to support related research and the COE members and affiliates generated matching contributions of more than \$2.4 million.

For additional information, see: <http://www.jams-coe.org/>

COE for Airliner Cabin Environment and Intermodal Research (ACERite)

In 2004, FAA Administrator Marion Blakey selected the COE for Airliner Cabin Environment (ACER) with Harvard University and Purdue University serving as the Technical Leads and Auburn University serving as the Administrative Lead. Following the Phase I evaluation and a recommendation from Secretary of Transportation Mary Peters, the COE expanded scope from airliner cabin research activities to include the intermodal transport environment. In 2008, the COE was renamed the COE for Research in the Intermodal Transport Environment (RITE). This COE has conducted R&D on cabin air quality, chemical and biological threats, and other related topics.

In FY 2015 the COE PMO extended cooperative agreements to prepare the COE for self-sufficiency. Under the on-going administrative leadership of Auburn University and current technical leadership of Kansas State University, core members currently include Boise State University, Harvard School of Public Health, Purdue University, and the Rutgers University School of Biomedical and Health Services.

Over the past decade, the FAA has awarded more than \$21 million to support research at this COE, the members and affiliates have generated more than \$28 million in matching contributions, and have prepared for close-out activities.

The FAA awarded \$59,013 in FY 2015.

For additional information, see: <http://www.acer-coe.org/>

COE Partnership for Air Transportation Noise and Emissions Reduction

In 2003, the FAA Administrator Marion Blakey selected the COE Partnership for Air Transportation Noise and Emissions Reduction (PARTNER) with Massachusetts Institute of Technology serving as the Lead member. This FAA COE has been co-sponsored by NASA and Transport Canada and has conducted R&D to identify, understand, measure, and mitigate the impacts of aircraft noise and aviation emissions. The COE focused on reducing uncertainty in issues dealing with climate impact and the health and welfare effects of emissions to actionable levels.

Core member universities have included: Boston University, Georgia Institute of Technology, Harvard University, Missouri University of Science and Technology (formerly University of Missouri - Rolla), Pennsylvania State University, Purdue University, Stanford University, University of Illinois at Urbana-Champaign, University of North Carolina - Chapel Hill, University of Pennsylvania and York University in Canada.

The FAA awarded \$77,000 in FY 2015. The COE continued to prepare for close-out activities during FY 2015.

For additional information, see: <http://partner.mit.edu/>

Attachment I - FY 2015

Appendix:

- A. Unmanned Aircraft Systems (COE UAS)**
- B. Alternative Jet Fuels and Environment (COE AJF&E)**
- C. General Aviation – Safety, Accessibility and Sustainability (COE GA / PEGASAS)**
- D. Commercial Space Transportation (COE CST)**
- E. Advanced Materials (COE JAMS)**
- F. Intermodal Transport Environment (COE ACERITE)**
- G. Partnership for Air Transportation Noise and Emission Reduction (COE NE / PARTNER)**

**FAA Center of Excellence Congressional Report
Unmanned Aircraft Systems (UAS)
Grant Awards / Fiscal Year 2015**

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
15-C-UAS-ERAU-001	UAS Ground Collision Severity	Embry-Riddle Aeronautical University	\$97,000		Embry-Riddle Aeronautical University	\$97,000	\$97,000
15-C-UAS-ERAU-002	UAS Maintenance, Modification, Repair, Inspection, Training, and Certification	Embry-Riddle Aeronautical University	\$154,000		Embry-Riddle Aeronautical University	\$154,000	\$154,000
15-C-UAS-ERAU-003	Surveillance Criticality for SAA	Embry-Riddle Aeronautical University	\$174,939		Embry-Riddle Aeronautical University	\$174,939	\$174,939
15-C-UAS-KSU-001	UAS Maintenance, Modification, Repair, Inspection, Training, and Certification	Kansas State University	\$541,000		Kansas State University	\$541,000	\$541,000
15-C-UAS-KU-001	UAS Ground Collision Severity	University of Kansas	\$92,000		University of Kansas	\$92,000	\$92,000
15-C-UAS-KSU-002	Unmanned Aircraft Integration: Certification Test to Validate UAS Industry Consensus Standards	Kansas State University	\$147,027		Kansas State University	\$147,027	\$147,027
15-C-UAS-NCSU-001	Surveillance Criticality for SAA	North Carolina State University	\$229,916		North Carolina State University	\$229,916	\$229,916
15-C-UAS-NMSU-001	Small UAS Detect and Avoid Requirements Necessary for Limited Beyond Visual Line of Sight (BVLOS) Operations	New Mexico State University	\$400,000		New Mexico State Univ.	\$400,000	\$400,000
15-C-UAS-NMSU-002	UAS Science and Research Panel Support	New Mexico State University	\$150,000		New Mexico State University	\$150,000	\$150,000
15-C-UAS-MSU-001	Startup Activities	Mississippi State University	\$250,000		Mississippi State University	\$240,609	\$250,000
15-C-UAS-MSU-002	UAS Airborne Collision Severity Evaluation	Mississippi State University	\$162,000		Ciriot Agency Mississippi State University	\$9,391 \$162,000	\$162,000
15-C-UAS-MSU-003	UAS Ground Collision Severity	Mississippi State University	\$97,000		Mississippi State University	\$97,000	\$97,000
15-C-UAS-MSU-004	Surveillance Criticality for SAA	Mississippi State University	\$110,000		Mississippi State University	\$110,000	\$110,000
15-C-UAS-MSU-005	Surveillance Criticality for SAA	Mississippi State University	\$261,158		Mississippi State University	\$261,158	\$261,158
15-C-UAS-MSU-006	September 15th Regional Administer Meetings in Mississippi	Mississippi State University	\$20,000		Mississippi State University	\$20,000	\$20,000
15-C-UAS-MTSU-001	UAS Airborne Collision Severity Evaluation	Montana State University	\$192,000		Montana State University	\$192,000	\$192,000
15-C-UAS-MTSU-002	UAS Maintenance, Modification, Repair, Inspection, Training, and Certification	Montana State University	\$105,000		Montana State University	\$105,000	\$105,000
15-C-UAS-ORSU-001	Surveillance Criticality for SAA	Oregon State University	\$75,000		Oregon State University	\$75,000	\$75,000
15-C-UAS-OSU-001	UAS Airborne Collision Severity Evaluation	Ohio State University	\$113,000		Ohio State University	\$113,000	\$113,000
15-C-UAS-OSU-002	Surveillance Criticality for SAA	Ohio State University	\$100,000		Ohio State University	\$100,000	\$100,000

FAA-160122-001

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
15-C-UAS-UAH-001	UAS Ground Collision Severity	University of Alabama-Huntsville	\$96,500		University of Alabama-Huntsville	\$96,500	\$96,500
15-C-UAS-UND-001	Small UAS Detect and Avoid Requirements Necessary for Limited Beyond Visual Line of Sight (BVLOS) Operations	University of North Dakota	\$399,992		University of North Dakota	\$399,992	\$399,992
15-C-UAS-UND-002	Surveillance Criticality for SAA	University of North Dakota	\$110,000		University of North Dakota	\$110,000	\$110,000
15-C-UAS-WISU-001	UAS Airborne Collision Severity Evaluation	Wichita State University	\$533,000		Wichita State University	\$533,000	\$533,000
15-C-UAS-WISU-002	Unmanned Aircraft Integration: Certification Test to	Wichita State University	\$152,974		Wichita State University	\$152,974	\$152,974
Totals			\$4,763,506	\$0		\$4,763,506	\$4,763,506

**FAA Center of Excellence Congressional Report
Alternative Jet Fuels and Environment (AJF&E)
Grant Awards / Fiscal Year 2015**

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
13-C-AJFE-BU-004	Cardiovascular Disease and Aircraft Noise Exposure	Boston University	\$200,000		Boston University	\$50,000	\$50,000
13-C-AJFE-BU-005	Modeling Airport-Related Air Pollutant Concentrations and Health Impacts	Boston University	\$150,000		Boston University	\$37,500	\$37,500
13-C-AJFE-GIT-008	Advanced Combustion (Area #3)	Georgia Tech Research Corporation	\$350,000		Georgia Institute of Technology	\$350,000	\$350,000
13-C-AJFE-GIT-009	Combustion Model Development and Evaluation	Georgia Tech Research Corporation	\$350,000		Georgia Institute of Technology	\$350,000	\$350,000
13-C-AJFE-GIT-011	Project 11-Rapid Fleet-Wide Environment Assessment Capability	Georgia Tech Research Corporation	\$150,000		Georgia Institute of Technology	\$150,000	\$150,000
13-C-AJFE-GIT-012	Aircraft Technology Modeling and Assessment	Georgia Tech Research Corporation	\$350,000		Georgia Institute of Technology	\$350,000	\$350,000
13-C-AJFE-GIT-013	CLEEN II - Aircraft Technology Modeling and Assessment	Georgia Tech Research Corporation	\$200,000		Georgia Institute of Technology	\$200,000	\$200,000
13-C-AJFE-GIT-014	Parametric Uncertainty Assessment for AEDT 2b	Georgia Tech Research Corporation	\$65,000		Georgia Institute of Technology	\$65,000	\$65,000
13-C-AJFE-GIT-015	Airline flight Data Examination to Improve Flight Performance Modeling	Georgia Tech Research Corporation	\$150,001		Georgia Institute of Technology	\$150,001	\$150,001
13-C-AJFE-GIT-017	Advanced Combustion (Area #3)	Georgia Tech Research Corporation	\$340,000		Georgia Institute of Technology	\$340,000	\$340,000
13-C-AJFE-GIT-018	Travel Support for FAA NJFCP Program	Georgia Tech Research Corporation	\$20,000		Georgia Institute of Technology	\$20,000	\$20,000
13-C-AJFE-MIT-008	Analytical Approach for Quantifying Noise from Advanced Operational Procedures	Massachusetts Institute of Technology	\$110,000		Massport	\$110,000	\$110,000
13-C-AJFE-MIT-010	Worldwide Life Cycle Analysis (LCA) of Greenhouse Gas (GHG) Emissions from Petroleum Jet Fuel	Massachusetts Institute of Technology	\$150,000		Massachusetts Institute of Technology	\$39,000	\$150,000
					Byogy Renewables, Inc.	\$111,000	
13-C-AJFE-MIT-011	Development of Rapid Fleet-Wide Environmental Assessment Capability Using a Response Surface Modeling Approach	Massachusetts Institute of Technology	\$26,000		Massachusetts Institute of Technology	\$18,000	\$26,000
					Byogy Renewables, Inc.	\$8,000	
13-C-AJFE-MIT-012	Alternative Jet Fuels Supply Chain Analysis	Massachusetts Institute of Technology	\$60,000		Massachusetts Institute of Technology	\$10,000	\$60,000
					Byogy Renewables, Inc.	\$50,000	
13-C-AJFE-MIT-014	Development of Rapid Fleet-Wide Environment Assessment capability using response Surface Modeling Approach	Massachusetts Institute of Technology	\$94,000		Massachusetts Institute of Technology	\$87,000	\$94,000
					Byogy Renewables, Inc.	\$7,000	

FAA-160122-001

FAA-160122-001

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
13-C-AJFE-MIT-016	Alternative Jet Fuels Supply Chain Analysis	Massachusetts Institute of Technology	\$325,000		Massachusetts Institute of Technology	\$63,000	\$325,000
13-C-AJFE-MIT-017	Improving Climate Policy Analysis Tools	Massachusetts Institute of Technology	\$150,000		Massachusetts Institute of Technology	\$46,000	\$150,000
13-C-AJFE-MIT-018	Development of NAS Wide and Global Rapid Aviation Air Quality	Massachusetts Institute of Technology	\$200,000		Oliver Wyman Group	\$104,000	\$200,000
13-C-AJFE-MIT-019	MIT-Co Lead Program Management: ASCENT Alternative Jet Fuels and Environment COE	Massachusetts Institute of Technology	\$54,073		Massachusetts Institute of Technology	\$54,073	\$54,073
13-C-AJFE-MST-004	Demonstration of Aircraft Turbine Engine-Non Volatile PM Sampling system for the Variable Response in Aircraft NVPM Testing (Variant) 2 Campaign.	University of Missouri	\$250,000		University of Missouri	\$250,000	\$250,000
13-C-AJFE-MST-005	Ambient Conditions Corrections for Non-Volatile PM Emissions Measurements	University of Missouri	\$500,000		University of Missouri	\$500,000	\$500,000
13-C-AJFE-OSU-002	Turbulent Flame Speed of Conventional and Alternative Jet Fuels Project	Oregon State University	\$80,000		Ohio State University	\$80,000	\$80,000
13-C-AJFE-OSU-003	Turbulent Flame Speed of Conventional and Alternative Jet Fuels Project	Oregon State University	\$80,000		Oregon State University	\$80,000	\$80,000
13-C-AJFE-PU-005	National Jet Fuels Combustion Program: Area #5 Atomization Tests and Models	Purdue University	\$250,000		Purdue University	\$250,000	\$250,000
13-C-AJFE-PU-006	GTAP Model and Database Modification to Better handle Cropping Changes in the Intensive Margin	Purdue University	\$110,000		Purdue University	\$30,000	\$110,000
13-C-AJFE-PU-008	Aircraft Technology Modeling and Assessment	Pennsylvania State University	\$100,000		Renewable Fuel Foundation University of Illinois-Chicago	\$55,000 \$25,000	\$160,117
13-C-AJFE-PU-009	Noise Emission and Propagation Modeling	Purdue University	\$90,000		Purdue University Conceptual Research Corp.	\$140,437 \$19,680	\$170,417
13-C-AJFE-PU-010	Techno-economic and Lifecycle Analysis of Alternative Aviation Biofuels Supply Chains	Purdue University	\$230,000		Purdue University Vancouver Airport Authority	\$133,417 \$37,000	\$230,000
13-C-AJFE-PU-011	National Jet Fuels combustion Program: Area #5	Purdue University	\$250,000		Purdue University	\$250,000	\$250,000
13-C-AJFE-PSU-009	Analytical Approach for Quantifying Noise from Advanced Operational Procedures	Pennsylvania State University	\$110,000		Massport	\$110,000	\$110,000
13-C-AJFE-PSU-012	Rotorcraft noise Abatement Operating Conditions Modeling	Pennsylvania State University	\$150,000		Sikorsky Aircraft American Helicopter Society International, Inc.	\$37,500 \$37,500	\$150,000
					Continuum Dynamics, Inc.	\$75,000	

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Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
13-C-AJFE-PSU-013	Civil, supersonic Over Flight, Sonic Boom (Noise) Standards Development. Study of Sonic Boom Variability Effects (Task #1).	Pennsylvania State University	\$50,000		Pennsylvania State University Boeing	\$30,000 \$20,000	\$50,000
13-C-AJFE-PSU-014	ASCENT Supersonic Community Instrumentation and Monitoring	Pennsylvania State University	\$150,000		Pennsylvania State University Boeing	\$130,000 \$20,000	\$150,000
13-C-AJFE-PSU-015	Noise Emission and Propagation Modeling, Year 2	Pennsylvania State University	\$110,000				
13-C-AJFE-PSU-016	Outreach Project for Center of Excellence for Aviation Sustainability Center (ASCENT)	Pennsylvania State University	\$50,000		Pennsylvania State University Port of Portland 75:25 Matching Waiver	\$12,863 \$3,807	\$16,670
13-C-AJFE-PSU-017	Alternative Jet Fuel Supply Chain Analysis - Mid-Atlantic	Pennsylvania State University	\$80,000		Pennsylvania State University	\$80,024	\$80,024
13-C-AJFE-PSU-018	Analytical Approach for Quantifying Noise from Advanced Operational Procedures	Pennsylvania State University	\$66,711		Pennsylvania State University	\$66,711	\$66,711
13-C-AJFE-SU-005	Development of LES Combustion Models to Characterize Jet-Fuels Effects on Combustion Stabilization and Ignition	Leland Stanford Junior University	\$100,000		Stanford University	\$100,000	\$100,000
13-C-AJFE-SU-006	Hybrid Approach to Chemical Kinetics Model Development and Evaluation	Leland Stanford Junior University	\$200,000		Stanford University	\$200,000	\$200,000
13-C-AJFE-SU-007	Development of Spray Models for the Description of Multicomponent Jet-Fuels Effects	Leland Stanford Junior University	\$100,000		Stanford University	\$100,000	\$100,000
13-C-AJFE-SU-008	Shock Tube and Flow Reactor Studies of the Kinetics of Jet-Fuels	Leland Stanford Junior University	\$330,000		Stanford University	\$330,000	\$330,000
13-C-AJFE-SU-009	ASCENT Project 10 -- Aircraft Technology and Modeling Assessment	Stanford University	\$100,000		Stanford University	\$100,000	\$100,000
13-C-AJFE-SU-010	Continuation of Development of Spray Models for the Description of Multicomponent Jet-Fuels Effects Ascent-29B	Stanford University	\$40,000		Stanford University	\$40,000	\$40,000
13-C-AJFE-SU-011	Shock Tube and Flow Reactor Studies of the Kinetics of Jet-Fuels	Stanford University	\$285,000		Stanford University	\$285,000	\$285,000
13-C-AJFE-UD-002	Referee Swirl-Stabilized Combuster Evaluation / Support for National Jet Fuel Combustion Program	University of Dayton	\$209,949		University of Dayton	\$209,949	\$209,949
13-C-AJFE-UD-004	National Jet Fuels Combustion Program-Overall Program integration and Analysis - Area 7	University of Dayton	\$85,000		University of Dayton	\$85,000	\$85,000
13-C-AJFE-UD-005	Alternative Fuels Test Database Library	University of Dayton	\$36,624		University of Dayton	\$36,624	\$36,624
13-C-AJFE-UD-006	Alternative Jet Fuels Test and Evaluation	University of Dayton	\$309,885		University of Dayton	\$309,885	\$309,885
13-C-AJFE-UD-007	Alternative Jet Fuels Test and Evaluation	University of Dayton	\$99,739		University of Dayton	\$99,739	\$99,739

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Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
13-C-AJFE-UD-008	Alternative Fuels Test Database Library	University of Dayton	\$30,000		University of Dayton	\$30,000	\$30,000
13-C-AJFE-UD-009	National Jet Fuels Combustions Program - Area #7	University of Dayton	\$134,999		University of Dayton	\$134,999	\$134,999
13-C-AJFE-UH-005	Alternative Jet Fuel Supply Chain Analysis - Tropical Region Analysis	University of Hawaii	\$75,000		University of Hawaii	\$75,000	\$75,000
13-C-AJFE-UI-004	Referee Swirl-Stabilized Combustor Evaluation / Support - Area #6	University of Illinois	\$140,000		University of Illinois	\$140,000	\$140,000
13-C-AJFE-UI-005	Advanced Combustion - Area #3	University of Illinois	\$40,000		University of Illinois	\$40,000	\$40,000
13-C-AJFE-UI-006	Overall Program Integration and Analysis - Area #7	University of Illinois	\$15,000		University of Illinois	\$15,000	\$15,000
13-C-AJFE-UI-007	Alternative Fuels Test Database Library	University of Illinois	\$63,000		University of Illinois	\$63,000	\$63,000
13-C-AJFE-UI-009	Alternative Fuels Test Database Library (Year 2)	University of Illinois	\$70,000		University of Illinois	\$70,000	\$70,000
13-C-AJFE-UI-010	A product Category File for Bio-Based Jet Fuel to Enable Environment Product Declarations	University of Illinois	\$25,000		University of Illinois	\$25,000	\$25,000
13-C-AJFE-UI-011	Alternative Jet Fuel Supply Chain Analysis - Indianapolis International Airport	University of Illinois	\$50,000		University of Illinois	\$50,000	\$50,000
13-C-AJFE-UI-012	Evaluation of FAA Climate Tools	University of Illinois	\$30,000		University of Illinois 75:25 Matching Waiver	\$7,500	\$7,500
13-C-AJFE-UI-013	Advanced Combustion (Area #3)	University of Illinois	\$120,000		University of Illinois	\$120,000	\$120,000
13-C-AJFE-UNC-004	Development of Aviation Air Quality Tools for Airport-Specific Impact Assessment: Air Quality Modeling	University of North Carolina	\$369,997		University of North Carolina 75:25 Matching Waiver	\$92,499	\$92,499
13-C-AJFE-UPENN-003	Pilot Study on Aircraft Noise and Sleep Disturbance	University of Pennsylvania	\$343,498		University of Pennsylvania	\$343,498	\$343,498
13-C-AJFE-UTENN-004	Techno-Market Analysis of US Biorefinery Supply Chains from Feedstock to Alternative Jet Fuels	University of Tennessee	\$100,000		University of Tennessee	\$100,000	\$100,000
13-C-AJFE-UW-003	Effect of Residual Oxygenated Functional Groups on the Behavior of Alternative Jet Fuel Properties - Project 31	University of Washington	\$29,997		University of Washington	\$29,997	\$29,997
13-C-AJFE-WaSu-004	Effect of Residual Oxygenated Functional Groups on the Behavior of Alternative Jet Fuel Properties - Project 31	Washington State University	\$49,998		Washington State University	\$49,998	\$49,998
13-C-AJFE-WaSU-005	Administer Program Office for Center of Excellence for Alternative Jet Fuels and Environment	Washington State University	\$444,970		Washington State University	\$444,970	\$444,970
13-C-AJFE-WaSU-006	Alternative Jet Fuels Supply Chain Analysis	Washington State University	\$370,000		Washington State University	\$370,000	\$370,000

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Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
		Totals	\$10,598,441	\$0		\$10,033,171	\$10,033,171

FAA Center of Excellence Congressional Report
General Aviation - Safety, Accessibility and Sustainability (PEGASAS)
Grant Awards / Fiscal Year 2015

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
12-C-GA-FIT-006	Project 2 - Rotorcraft ASIAS	Florida Institute of Technology	\$65,000		Florida Institute of Technology	\$65,000	\$65,000
12-C-GA-FIT-007	Project 2 - Rotorcraft ASIAS	Florida Institute of Technology	\$88,235		Florida Institute of Technology	\$88,235	\$88,235
12-C-GA-FIT-008	Project 15-ASISP Cyber Security	Florida Institute of Technology	\$64,699		Florida Institute of Technology	\$64,699	\$64,699
12-C-GA-GIT-007	Project 5 - National General Aviation Flight Information Database	Georgia Tech Research Corporation	\$97,123		Georgia Tech Research Corporation	\$97,123	\$97,123
12-C-GA-GIT-008	Project 2: Rotorcraft ASIAS	Georgia Tech Research Corporation Sub: University of North Dakota	\$224,672 \$81,825	\$111,825	Georgia Tech Research Corporation University of North Dakota	\$112,847 \$81,825	\$224,672
12-C-GA-ISU-006	Project No. 1 Heated Airport Pavements	Sub: CAE Flightscope, Inc. Iowa State University	\$30,000 \$166,634		CAE Flightscope Iowa State University	\$30,000 \$166,634	\$166,634
12-C-GA-ISU-007	Project 17 - LED Lighting: Hot/Cold Performance Testing	Iowa State University	\$105,406		Iowa State University	\$105,406	\$105,406
12-C-GA-OSU-011	Project 4 - Weather Technology in the Cockpit Program	Ohio State University Sub: Southern Illinois University	\$80,939 \$47,804	\$47,804	Ohio State University Southern Illinois University	\$218,901 \$40,926	\$259,827
12-C-GA-OSU-013	Project 5 - National General Aviation Flight Information Database	Ohio State University	\$89,503		Ohio State University	\$85,169	\$85,169
12-C-GA-OSU-017	Project 16 - Characterization of Derived Angle of Attack and Flight Path Angle Algorithms	Ohio State University	\$10,000		Ohio State University	\$10,098	\$10,098
12-C-GA-OSU-018	Project 17 - LED Lighting: Hot/Cold Performance Testing	Ohio State University	\$126,377		Ohio State University	\$126,377	\$126,377
12-C-GA-PU-019	Project 3 - Angle of Attack Equipment in General Aviation Operations	Purdue University	\$716		Purdue University	\$1,338	\$1,338
12-C-GA-PU-020	Project 4 WTIC VFR/MC to IMC Transition & GA MET Information Optimization Phase 2	Purdue University Sub: Western Michigan University	\$556,514 \$277,784	\$277,784	Western Michigan University Purdue University	\$277,371 \$283,076	\$560,447
12-C-GA-PU-021	Project 8 - Aviation Rumble Strips to Enhance Aviation Safety	Purdue University	\$173,022		Purdue University	\$173,022	\$173,022
12-C-GA-PU-022	Project 10 - LED Taxiway Lighting System Testing and Monitoring	Purdue University	\$5,000		Purdue University	\$6,000	\$6,000
12-C-GA-PU-023	Project 13 - Alternative Aviation Fuels Fire Safety	Purdue University	\$199,548		Purdue University	\$199,517	\$199,517
12-C-GA-PU-025	Project 5 - National General Aviation Flight Information Database	Purdue University	\$108,624		Purdue University	\$108,635	\$108,635
12-C-GA-PU-027	Project #14 Midpoint Marking Project	Purdue University	\$80,322		Purdue University	\$80,318	\$80,318

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Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
12-C-GA-PU-029	Management of PEGASAS (Partnership to Enhance General Aviation Safety, Accessibility, and Sustainability)	Purdue University	\$63,952		Purdue University	\$63,958	\$63,958
12-C-GA-PU-030	Project 2 - Rotorcraft ASIAs	Purdue University	\$78,123		Purdue University	\$78,295	\$78,295
12-C-GA-PU-031	Project 10 - LED Taxiway Lighting System Testing and Monitoring	Purdue University	\$30,696		Purdue University	\$33,069	\$33,069
12-C-GA-PU-032	Project 13 - Alternative Aviation Fuels Fire Safety (Year 2)	Purdue University	\$190,578		Purdue University	\$208,664	\$208,664
12-C-GA-TEES-004	Project 4 Weather Technology in Cockpit Program GA Weather Alerting Phase 2	Texas A&M University Sub: Western Michigan University	\$224,359 \$64,795	\$64,795	Western Michigan University Texas A&M	\$110,000 \$117,461	\$227,461
12-C-GA-TEES-005	Project #14 Midpoint Runway Making Project	Texas A&M University	\$82,526		Texas A&M University	\$85,526	\$85,526
12-C-GA-TEES-006	Project 16: Characterization of Derived Angle-of-Attack and Flight Path Angle Algorithms	Texas A&M University	\$53,679		Texas A&M University	\$53,679	\$53,679
12-C-GA-TEES-007	Project 17 - LED Lighting: Hot/Cold Performance Testing	Texas A&M University	\$126,377		Texas A&M	\$125,813	\$125,813
Totals			\$3,092,624	\$502,208		\$3,298,982	\$3,298,982

Contract Awards - Fiscal Year 2015

Contract Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Not Subject to Matching Requirement	Total Sub-Award Amount
DTFACT-13-D-00010-0002-001	Rumble Strips Installation	Purdue University	No Matching Required \$45,000	
DTFACT-13-D-00010-0005-003	FAA WJHTC Fuels Program-Rig Testing Support - Phase I	Purdue University Sub: Florida Institute of Technology Sub: Sterling	\$1,505,212 \$75,217 \$814,600 No Matching Required	\$889,817
DTFACT-13-D-00010-0006, 002	NextGen Alternative Fuels for GA Phase I Material Compatibility Testing	Purdue University Sub: InSpace, LLC Sub: Sterling	\$1,221,386 \$82,420 \$93,750 No Matching	\$176,170
Totals			\$2,771,598	\$1,065,987

**FAA Center of Excellence Congressional Report
Commercial Space Transportation (CST)
Grant Awards / Fiscal Year 2015**

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
10-C-CST-CU-038	Task 184: Spacecraft Human Rating	University of Colorado	\$15,390		University of Colorado	\$15,390	\$15,390
10-C-CST-CU-039	187-CU: Space Situational Awareness Improvements to Enable Safe Commercial Space Operations and Traffic Management Task 187	University of Colorado	\$36,000		University of Colorado	\$36,000	\$36,000
10-C-CST-FIT-030	COE CST Collaboration Coordination	Florida Institute of Technology	\$40,260		Orion America Technologies	\$40,260	\$40,260
10-C-CST-FIT-031	COE CST Collaboration Coordination	Florida Institute of Technology	\$23,604		Florida Institute of Technology	\$23,604	\$23,604
15-C-CST-FSU-001	Task 241: High Temperature, Optical Sapphire Pressure Sensors for Hypersonic Vehicles	Florida State University	\$79,763		Florida State University	\$79,763	\$79,763
15-C-CST-FSU-002	Task 325: Optical Measurements of Rocket Nozzle Thrust and Noise	Florida State University	\$40,000		Florida State University	\$40,000	\$40,000
10-C-CST-FSU-027	244-FSU: Autonomous Rendezvous and Docking	Florida State University	\$60,000		Florida State University	\$60,000	\$60,000
10-C-CST-FSU-028	244-FSU: Autonomous Rendezvous and Docking	Florida State University	\$10,580		Florida State University	\$10,580	\$10,580
10-C-CST-FSU-029	244-FSU Autonomous Rendezvous and Docking	Florida State University	\$5,502		Florida State University	\$5,502	\$5,502
10-C-CST-NMSU-020	220-NMSU Establishment of Framework for Commercial Space Launch Standards	New Mexico State University	\$50,168		SpaceNews Bachner Consultants, Inc.	\$83,600 \$8,000	\$91,600
15-C-CST-NMT-001	Task 303: NMT-COE CST Program Office Support	New Mexico Institute of Mining and Technology Orion America Technologies, LLC.	\$50,000 \$50,000	\$50,000	Orion America Technologies, LLC.	\$50,000	\$50,000
15-C-CST-NMT-002	Task 303: NMT-COE CST Program Office Support	New Mexico Institute of Mining and Technology Orion America Technologies, LLC.	\$7,000 \$7,000	\$7,000	Orion America Technologies, LLC.	\$7,000	\$7,000
10-C-CST-NMT-027	Task 299: Nitrous Oxide Composite Tank Testing	New Mexico Institute of Mining and Technology	\$76,738		New Mexico Institute of Mining and Technology	\$76,738	\$76,738
10-C-CST-NMT-028	228-NMT: Magneto-Elastic Sensing for Structural Health Monitoring	New Mexico Institute of Mining and Technology	\$34,980		New Mexico Institute of Mining and Technology	\$34,980	\$34,980

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
10-C-CST-NMT-029	Task 303: OMIS Intergration and COE Program Support	New Mexico Institute of Mining and Technology Orion America Technologies, LLC.	\$50,000 \$50,000	\$50,000	Orion America Technologies, LLC.	\$50,000	\$50,000
10-C-CST-NMT-030	Task 299: Nitrous Oxide Composite Tank Testing	New Mexico Institute of Mining and Technology	\$7,756		New Mexico Institute of Mining and Technology	\$7,756	\$7,756
15-C-CST-SU-001	Task 324: SU-Space commercialization Strategies form the Internet Experience	Stanford University	\$22,071		Stanford University	\$22,071	\$22,071
10-C-CST-SU-047	Task 185: Unified4D Trajectory Approach for Integrated Management of Commercial	Stanford University	\$140,000		Stanford University	\$140,000	\$140,000
10-C-CST-SU-049	Task 195: Unified 4D Trajectory Approach for Integrated Management of Commercial Air and Space Traffic	Stanford University	\$50,000		Stanford University	\$50,000	\$50,000
15-C-CST-UC-001	Project 320: Commercial Spaceflight Risk Assessment and Communication	University of Colorado	\$74,275		University of Colorado	\$74,275	\$74,275
15-C-CST-UC-002	Task 193: Role of the COE CST in Encourage, Facilitate and Promote	University of Colorado	\$50,176		University of Colorado	\$50,176	\$50,176
15-C-CST-UCF-001	Task 253: Ultra High Temperature Composites, Damage Modeling and Health Monitoring for TPS	University of Central Florida	\$35,000		University of Central Florida	\$35,000	\$35,000
15-C-CST-UCF-002	Task 311: LED-based Low Cost Gas Sensor for Crew and Vehicle Safety	University of Central Florida	\$49,000		University of Central Florida	\$49,000	\$49,000
10-C-CST-UCF-015	311-UCF: LED-based Low Cost Gas Sensor for Crew and Vehicle Safety	University of Central Florida	\$2,520		University of Central Florida	\$2,520	\$2,520
15-C-CST-UTMB-001	Task 330-UTMB Administrative Support	University of Texas Medical Branch at Galveston Orion America Technologies, LLC.	\$119,972 \$102,831	\$102,831	University of Texas Medical Branch at Galveston Orion America Technologies, LLC.	\$17,141 \$102,831	\$119,972
15-C-CST-UTMB-002	310-UTMB: Increasing Cabin Survivability in Commercial Spacecraft	University of Texas Medical Branch at Galveston	\$19,375		University of Texas Medical Branch at Galveston	\$19,375	\$19,375
15-C-CST-UTMB-003	309-UTMB: Suborbital Pilot Assessment	University of Texas Medical Branch at Galveston	\$36,290		University of Texas Medical Branch at Galveston	\$36,290	\$36,290
15-C-CST-UTMB-004	308-UTMB: Suborbital SFP Anxiety Assessment	University of Texas Medical Branch at Galveston	\$81,345		University of Texas Medical Branch at Galveston	\$81,345	\$81,345
10-C-CST-UTMB-033	256-UTMB: Testing and Training in High-G Profiles using the NASTAR Center Centrifuge	University of Texas Medical Branch at Galveston	\$5,099		University of Texas Medical Branch at Galveston	\$5,099	\$5,099
Totals			\$1,272,864	\$209,831		\$1,314,296	\$1,314,296

**FAA Center of Excellence Congressional Report
Advanced Materials (JAMS)
Grant Awards / Fiscal Year 2015**

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
12- C-AM-FIU-005	Effect of Surface Contamination on Composite Bond Integrity and Durability	Florida International University	\$75,000		Florida International University	\$75,000	\$75,000
12-C-AM-OSU-005	Failure of Notched Laminates Under Out-of-plane Bending	Oregon State University	\$75,000		Ohio State University	\$75,000	\$75,000
12-C-AM-UCSD-006	Impact Damage Formation on Composite Aircraft Structures	University of Cali, San Diego	\$380,000		University of Cali, San Diego	\$380,000	\$380,000
12-C-AM-UU-009	Development and Evaluation of Fracture Mechanics Test Methods for Sandwich Composites	University of Utah	\$75,000		University of Utah	\$75,000	\$75,000
12-C-AM-UU-010	Durability of Adhesively Bonded Joints for Aircraft Structures	University of Utah	\$75,000		University of Utah	\$75,000	\$75,000
12-C-AM-UW-020	Administration of the JAMS-AMTAS FAA Center of Excellence	University of Washington	\$81,157		University of Washington	\$81,157	\$81,157
12-C-AM-UW-022	Effects of Moisture Diffusion in Sandwich Composites	University of Washington	\$74,745		University of Washington	\$74,745	\$74,745
12-C-AM-UW-023	Improving Adhesive Bonding of Composite through Surface Characterization	University of Washington	\$75,000		University of Washington	\$75,000	\$75,000
12-C-AM-WSU-004	Durability of Bonded Aerospace Structure	Washington State University	\$74,998		Washington State University	\$74,998	\$74,998
12-C-AM-WISU-034	Dynamic Response of Composite Structures Subjected to Blast Loading	Wichita State University	\$125,000		State of Kansas	\$125,000	\$125,000
12-C-AM-WISU-035	Development and Safety Management of Composite Certification Guidance	Wichita State University	\$54,000		State of Kansas	\$54,000	\$54,000
12-C-AM-WISU-036	Administration of the Center of Excellence for Composites and Advanced Materials (CECAM) at Wichita State University	Wichita State University	\$75,000		State of Kansas	\$75,000	\$75,000
12-C-AM-WISU-037	SRM Repair Round Robin Exercise	Wichita State University	\$64,000		State of Kansas	\$64,000	\$64,000
12-C-AM-WISU-038	CACRC Bonded Repair Round Robin and Process Parameter Evaluation	Wichita State University	\$125,000		State of Kansas	\$125,000	\$125,000
12-C-AM-WISU-039	Dynamic Response of Composite Structures Subjected to Blast Loading-Phase III	Wichita State University	\$150,000		State of Kansas	\$150,000	\$150,000
12-C-AM-WISU-040	Composites Materials Handbook	Wichita State University	\$125,000		State of Kansas	\$124,500	\$125,000
12-C-AM-WISU-041	Development and Safety Management of Composite Certification Guidance	Wichita State University	\$124,000		Wichita State University	\$124,000	\$124,000
12-C-AM-WISU-042	Certification by Analysis - Structural Crashworthiness	Wichita State University	\$100,000		State of Kansas	\$100,000	\$100,000

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Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
12-AM-WISU-043	Damage Tolerance Testing and Analysis Protocols for Full-Scale composite airframe Structures under Repeated Loading	Wichita State University	\$150,000		State of Kansas	\$150,000	\$150,000
12-C-AM-WISU-044	Environmental Factor Influence on Composite Design and Certification	Wichita State University	\$150,000		State of Kansas	\$150,000	\$150,000
12-C-AM-WISU-045	Adhesive Bond Process Qualification	Wichita State University	\$125,000		State of Kansas	\$125,000	\$125,000
12-C-AM-WSU-003	Durability of Bonded Aerospace Structure	Washington State University	\$76,712		Washington State University	\$76,712	\$76,712
Totals			\$2,429,612	\$0		\$2,429,112	\$2,429,612

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FAA Center of Excellence Congressional Report
Intermodal Transport Environment (ACERITE)
Grant Awards / Fiscal Year 2015

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
10-C-RITE-AU-010	National Air Transportation Center of Excellence for Research in the Intermodal Transport Environment (RITE) - Sensors and Prognostics to Mitigate Bleed Air Contamination Events - V/PR 3	Auburn University	\$59,013		Auburn University	\$59,013	\$59,013
		Totals	\$59,013	\$0		\$59,013	\$59,013

FAA-160122-001

FAA Center of Excellence Congressional Report
Partnership for Air Transportation Noise and Emission Reduction (PARTNER)
Grant Awards / Fiscal Year 2015

Grant Number	Research Projects	Center of Excellence Award Recipients	FAA Grant Award - Subject to Matching Requirement	Total Sub-Award Amount	Non-Federal Organizations Providing Match (Source of Matching Contribution)	Amount/Value of Contribution (FY 15)	Total Matching Amount
09-C-NE-MIT-039	Program Management for Aircraft Noise and Aviation Emissions Mitigation COE	Massachusetts Institute of Technology	\$77,000				
Totals			\$77,000	\$0		\$0	\$0

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