



**Industry Day**  
**Fully Integrated Lifecycle Mission Support Services**  
**(FILMSS)**  
**RFP NNA12412481R**  
**November 8, 2012**





## Safety and Concierge

- **In the event of an emergency, there are two exits on either side in the back of the room.**
- **The nearest building exit is located slightly to the right as you exit this auditorium. There is one exit in front of the building.**
- **Restrooms are located on the right hand side of the lobby, once the auditorium has been exited.**
- **Barcelona Café is located in Bldg 3 on Severyns Avenue between North and South Akron Road**
- **Ames Cafeteria is located at N235 on King Road (badge required)**



National Aeronautics and  
Space Administration



# Welcome and Introductions

**Dr. Steven Zornetzer**

**Jeannette Albiez**

**Ingrid Desilvestre**

**Associate Center Director - Technical**

**Contracting Officer**

**Program Executive, Office of the Chief  
Technologist**

# Agenda

<b>8:00 AM</b>	<b>Registration</b>	
<b>9:00 AM</b>	<b>Welcome &amp; Introduction</b>	<b>Dr. Steven Zornetzer</b>
<b>9:20 AM</b>	<b>Procurement Information</b>	<b>Jeannette Albiez</b>
<b>9:40 AM</b>	<b>FILMSS Technical</b>	<b>Ingrid Desilvestre</b>
<b>10:40 AM</b>	<b>Break/ Submit Questions</b>	
<b>10:50 AM</b>	<b>Questions Due</b>	<b>Offerors</b>
<b>11:00 AM</b>	<b>Questions and Answers</b>	<b>Ingrid Desilvestre</b>
<b>11:30 AM</b>	<b>Close</b>	



# NASA Ames Research Center Short Overview

Steven Zornetzer  
Associate Director, Technical  
NASA Ames Research Center

2012



# Seven Decades of Innovation



Tektites



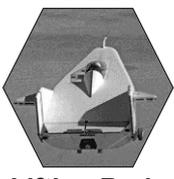
Flight Simulator



Blunt Body Concept



Transonic Flow



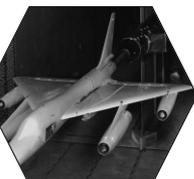
Lifting Body



Swept-Back/Wing



Flight Research

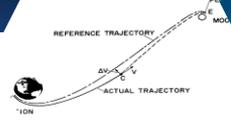


Conical Camber

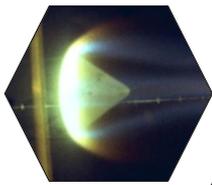
1940



Arcjet Research



Apollo Guidance System

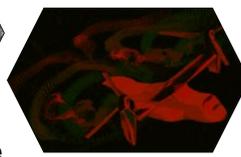


Apollo Heat Shield Tests

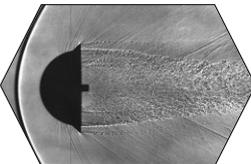


Life Sciences Research

1960



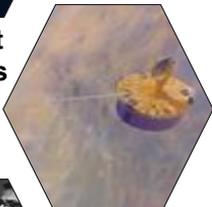
CFD



Hypervelocity Free Flight



Pioneer 10/11



Pioneer Venus

1970



Tiltrotor



Kuiper Observatory



80x120 Wind Tunnel



X-36

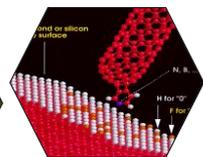


Galileo

1980



Viking



Nanotechnology



ER-2



Lunar Prospector



Space Biology



Lunar Science Institute

1990 2000



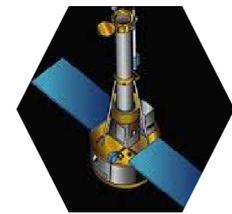
Human Centered Computing



NASA Research Park



Mars Science Lab



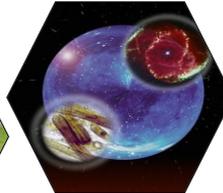
IRIS



O/OREOS



LCROSS



Astrobiology Institute



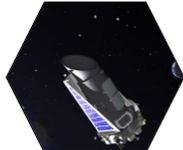
Operational Supercomputers Pleiades



LADEE



SOFIA



Kepler



Sustainability Base



Aero Institute



# Ames Today



- 2480 employees\*
- ≈900M + annual revenue  
(including reimbursable)
- \*in addition, 900 students,  
summer 2012

- Science
  - Space, Earth, Biological Sciences
  - Astrobiology, Lunar Science
- Exploration Systems
  - Exploration Technology Development
  - Thermal Protection Systems
  - Supercomputing
- Projects and Missions
- Aeronautics & Aviation
  - NextGen Airspace Systems
  - Fundamental Aeronautics
  - Aviation Safety
  - Green Aviation
- Affordable Small Satellites
- Innovation, Education, & Entrepreneurial Collaborations
  - NASA Research Park



## ***Science Missions***

- History of Successful Mission Management
- 40 Years of Airborne Astronomy
- Stratospheric Observatory For Infrared Astronomy (SOFIA)
- Kepler Mission - Search for Habitable Planets
- Lunar Crater Observation and Sensing Satellite (LCROSS)
- Near Earth Objects





# Lunar Crater Observation and Sensing Satellite (LCROSS): Finding Water on Moon

Lunar Kinetic Impactor Mission was employed to look for water ice at the Moon's South Pole

Launched: June 2009

Lunar Impact: October 2009

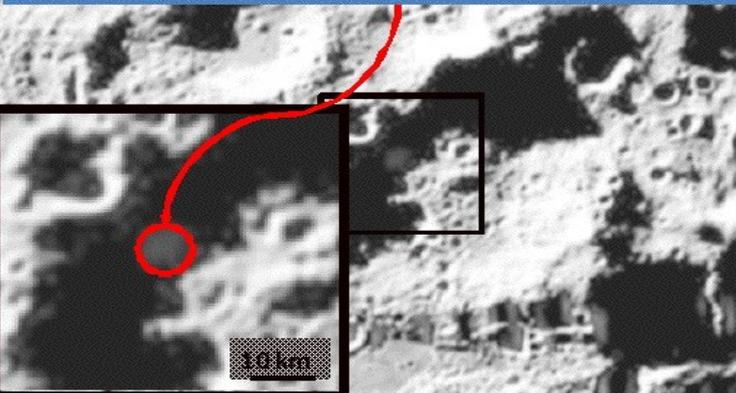
Impact believed to be within 100m of target

Collected 4 minutes of data

**YES- THERE IS WATER ON THE MOON!!!**



Field of View of instruments making measurements of the vapor and debris composition



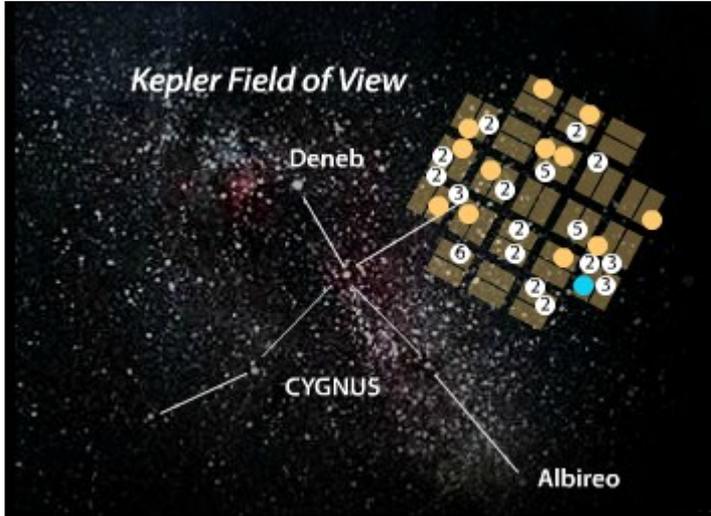
**LCROSS heading to Moon**

**Centaur Impact: T=0**

**Shepherding Spacecraft Impact: T + 4 mins**



# Kepler: The Search for Habitable Planets

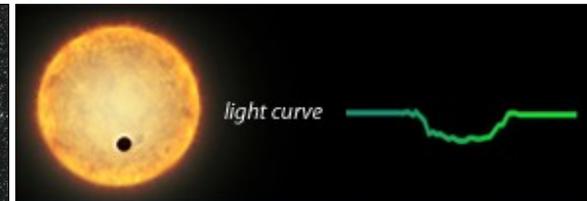
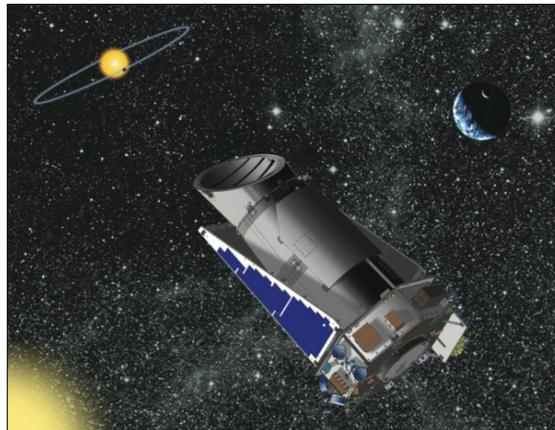
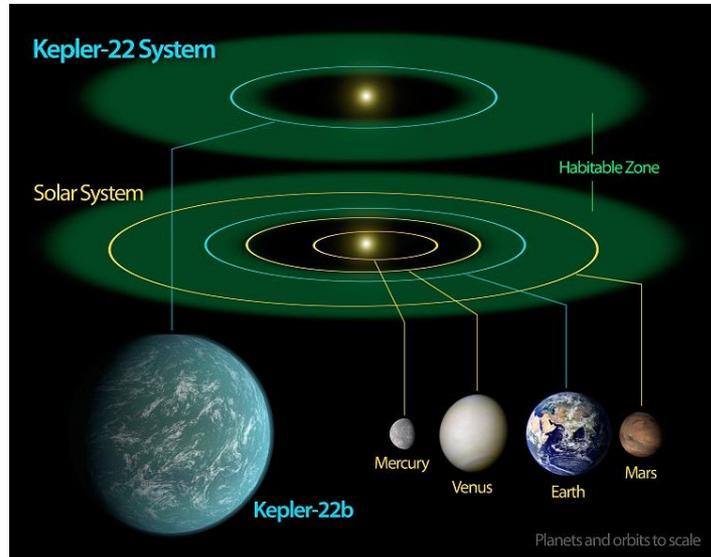


✧ **Mission:** survey part of the Milky Way galaxy to find Earth-size planets in or near the habitable zone and determine how many of the billions of stars in our galaxy have such planets.

✧ **Launch Date:** March 2009

✧ **Science Observations:** started May 2009

✧ **Discoveries:** 2,326 planet candidates as of December 5, 2011





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# ***SOFIA- Stratospheric Observatory for Infrared Astronomy***

**Joint program by NASA AMES/Dryden  
and German Aerospace Center (DLR).**

**Boeing 747SP aircraft equipped with a  
2.8 m IR telescope.**

**Largest airborne observatory in the  
world.**

**Explores the infrared universe above the  
interference from the Earth's water  
vapor atmosphere.**

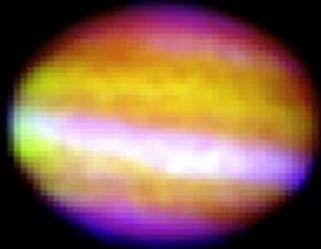
**June 2010: First Light seen**



SOFIA infrared image  
(5.4, 24, and 37  $\mu\text{m}$ )



Visible light image



M82

Inset (visible light)

Visible light image



SOFIA infrared image (19, 31, and 37  $\mu\text{m}$ )



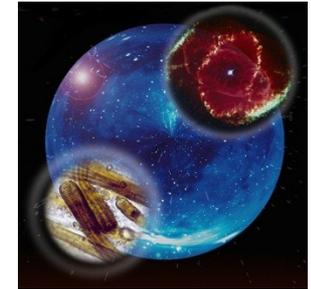
# Ames Technology Areas



**Aerospace and Aeronautics**



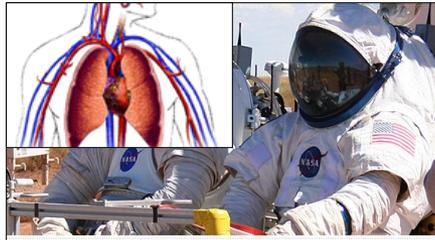
**Integrated Systems Health Management (ISHM)**



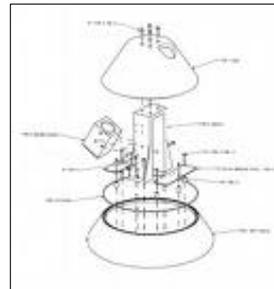
**Astrobiology Institute**



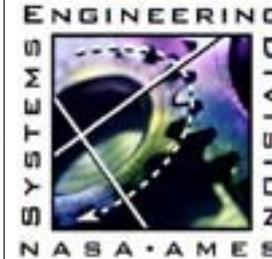
**Small Satellite Systems**



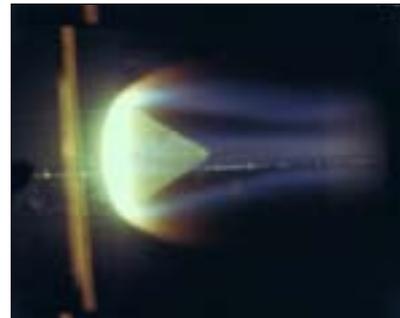
**BioTech/Biomedical**



**Systems Engineering and Design**



**Robotics and Artificial Intelligence**



**Materials Science and Entry Systems**



**Software and High-end Computing**



National Aeronautics and  
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# ***Astrobiology Institute***

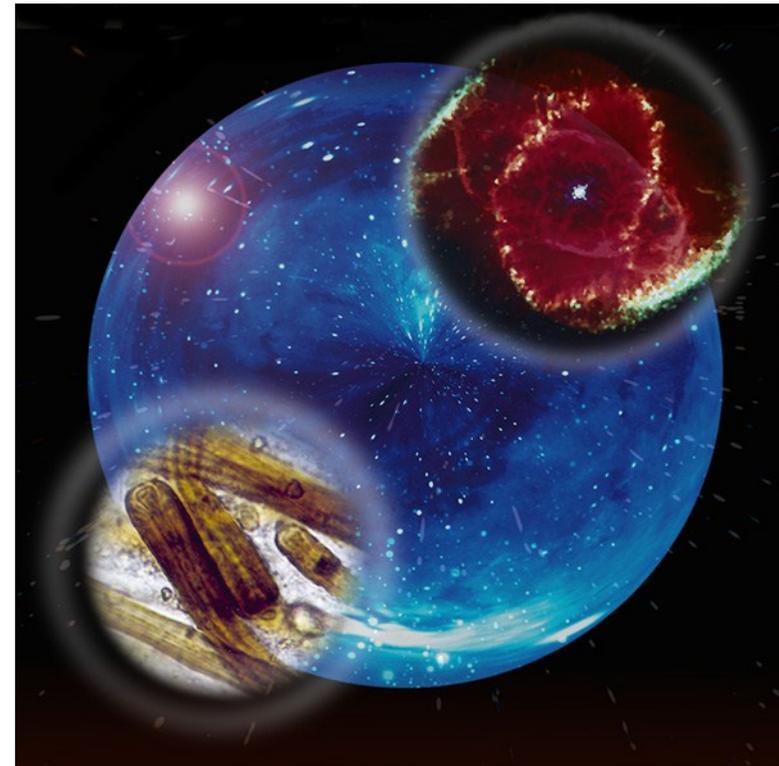
Scientific Study of Life in the Universe

Three Fundamental Questions

- ▶ How does life begin and evolve?
- ▶ Does life exist elsewhere in the universe?
- ▶ What is life's future on Earth and beyond?

NASA Astrobiology Institute at Ames

- ▶ Dr. Carl Pilcher, Director
- ▶ 12 Lead Member Institutions
- ▶ 6 International Partners





# NASA Lunar Science Institute (NLSI)

## NASA LUNAR SCIENCE INSTITUTE



### NASA LUNAR SCIENCE INSTITUTE THE SCIENCE

- 1 **OF THE MOON:** Investigations of the nature and history of the Moon (including research on lunar samples) to learn about this specific object and thereby provide insights into the evolution of our solar system.
- 2 **ON THE MOON:** Investigations of the effects of the lunar environment on terrestrial life and the equipment that supports lunar inhabitants, and the effects of robotic and human presence on the lunar environment.
- 3 **FROM THE MOON:** Use of the Moon as a platform for performing scientific investigations, including observations of the Earth and other celestial phenomena that are uniquely enabled by being on the lunar surface.

### NASA LUNAR SCIENCE INSTITUTE MISSION

Advance the field of lunar science by:

- 1 carrying out and supporting collaborative research in lunar science, investigating the Moon itself and using the Moon as a unique platform for other investigations;
- 2 providing scientific and technical perspectives to NASA on its lunar research programs, including developing investigations for current and future space missions;
- 3 supporting development of the lunar science community and training the next generation of lunar science researchers; and
- 4 supporting Education and Public Outreach by providing scientific content for K-14 education programs, and communicating directly with the public.



# ***NASA Aeronautics Research Institute (NARI)***

## **What is NARI?**

- NARI is a virtual institute. It is comprised of multi-institutional, multi-disciplinary research teams creating new tools and technologies for reducing air traffic congestion and environmental impacts, improving safety, and designing aircraft with unconventional capabilities.

## **What will NARI do?**

- NARI will facilitate technical exchanges, solicit research proposals, award research grants, and use advanced communication technologies such as Web-based seminars to disseminate research findings.

## **Why did NASA Aeronautics establish NARI?**

- NASA wants to make deliberate investments in innovative, early stage, and potentially revolutionary aviation concepts and technologies. The NASA Aeronautics Research Institute provides an opportunity for innovation not just in the technical portfolio, but also in the management of it.





# Current Active Facilities, 2009



**National Full Scale Aerodynamic Complex, 80x120 Wind Tunnel**



**Vertical Motion Simulator**



**Small Spacecraft Development Facility**



**Unitary Plan Wind Tunnel**



**SOFIA**



**Machine Shops**



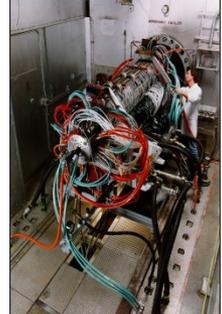
**Small Satellite Lab**



**Pleiades - Columbia Super Computer**



**Ballistic Range**



**Arc Jets**



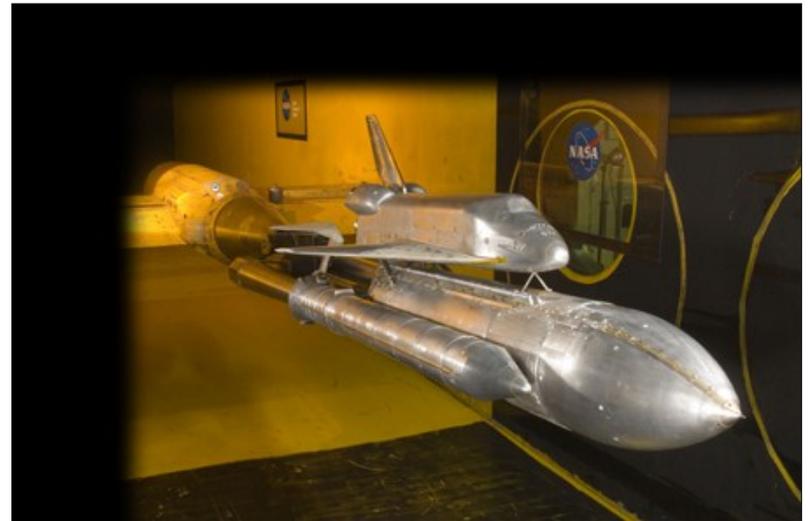
Image copyright Dariusz Jezewski



**Airfield and Hangars**

## *Wind Tunnels*

Space transportation vehicles require significant wind tunnel testing to address configuration development for planetary exit and reentry challenges.



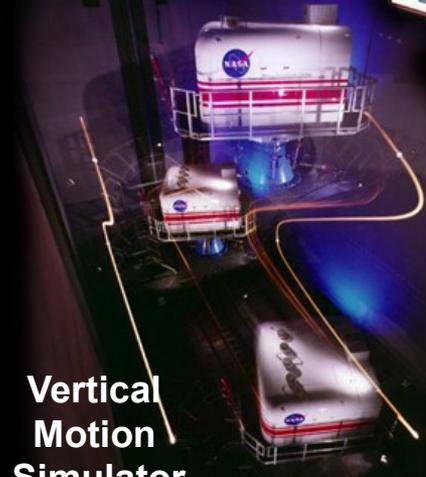


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Space Administration



# Simulators

**Future Flight Central**



**Vertical  
Motion  
Simulator**



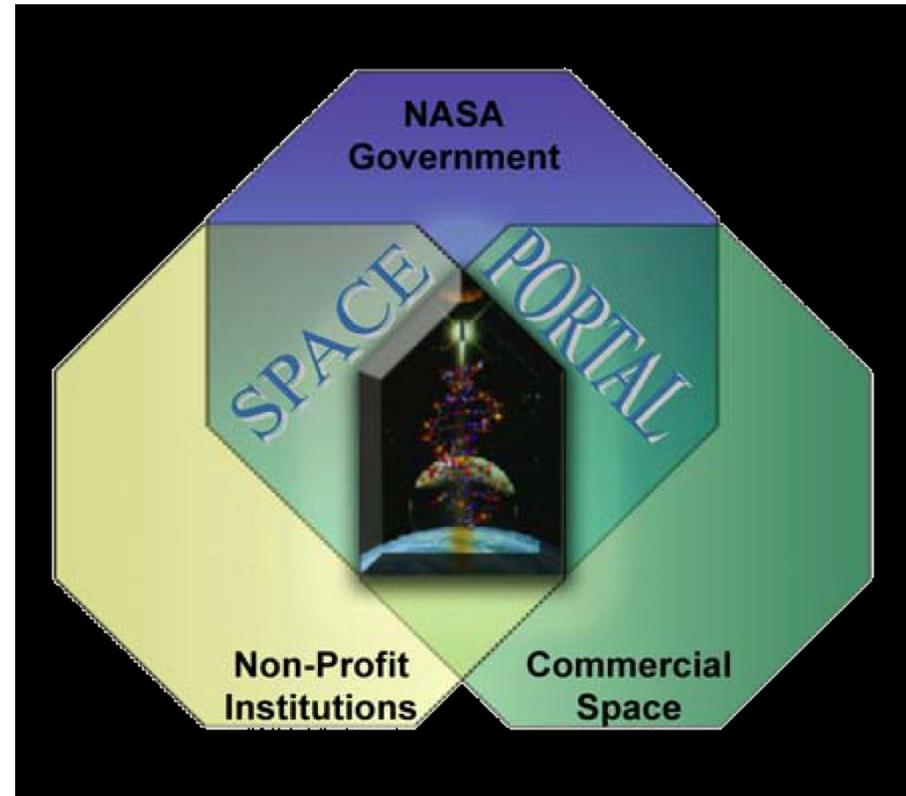
**Crew-Vehicle  
Systems  
Research Facility**

## *Emerging Office Space*

### **NASA partnerships to explore collaboration in space launch systems and payloads launched from aircraft**

NASA Ames will become a West Coast 'space portal' for affordable small satellites and other scientific and commercial payloads

Areas of collaboration to include mission, vehicle, and payload concept analyses; systems engineering; and payload integration, as well as use of NASA Ames' facilities, such as its wind tunnels, arc-jet facility, flight simulators, hangars and runways





# NASA Research Park

Innovative Collaboration in Science, Engineering & Education

## 90+ Partners Today

University Associates

Google-North East Section

University of California/UARC-Bldg. 555

M2MI Corporation-Bldg.19

Carnegie Mellon University-Bldg. 23

San Jose State University

-Metropolitan Technology

Center in Bldg. 583C

Foothill-De Anza Community College

United Negro College Fund Special

Programs Corporation-Bldg.19

Space Technology Center

-San Jose State, Stanford, Santa Clara Univ.,

Utah State Univ. /Micro Satellite Classes

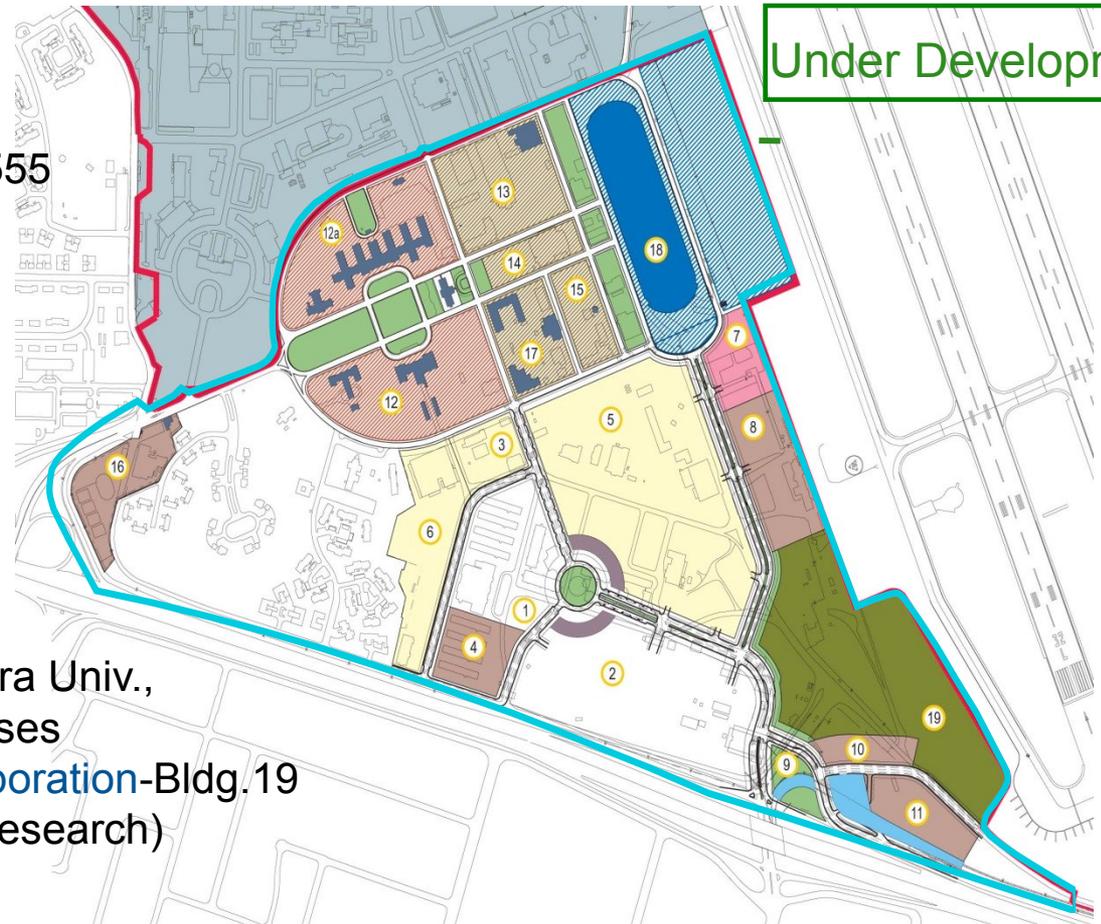
Kentucky Science & Technology Corporation-Bldg.19

Bloom Energy-Bldg. 543 (Fuel Cell Research)

Industry Partners-Bldg. 566 & 19

UAV Center-Bldg.18

International Space University





National Aeronautics and Space Administration



# Educational Activities



Student Space Biology Research Program (Ames PAO Education Program)



Foothill DeAnza Internship Program



Minority University Research and Education Program (MUREP)



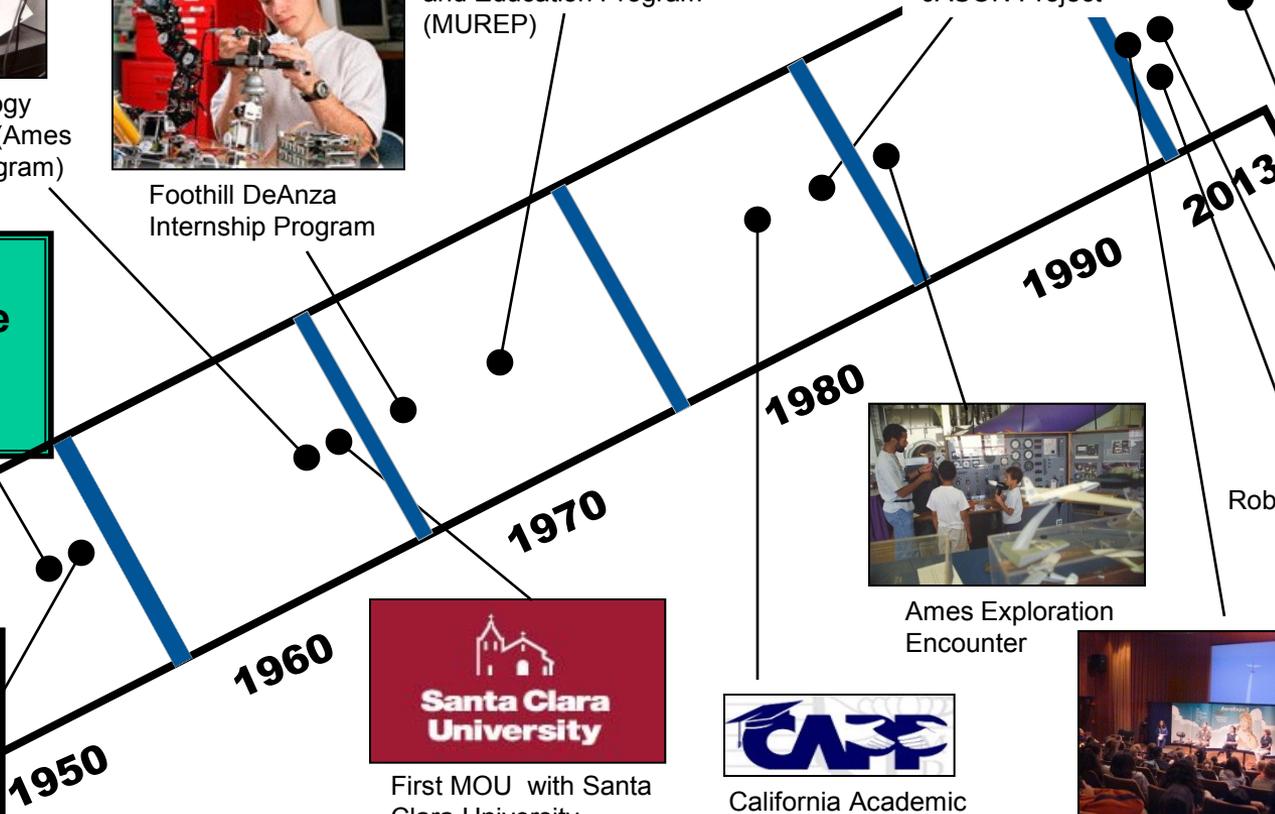
JASON Project



NASA Explorer Schools

**Ames Cooperative Education Programs**

**Stanford Visiting Professors Programs**



Ames Exploration Encounter



Robotics Alliance Project



First MOU with Santa Clara University



California Academic Partnership Program



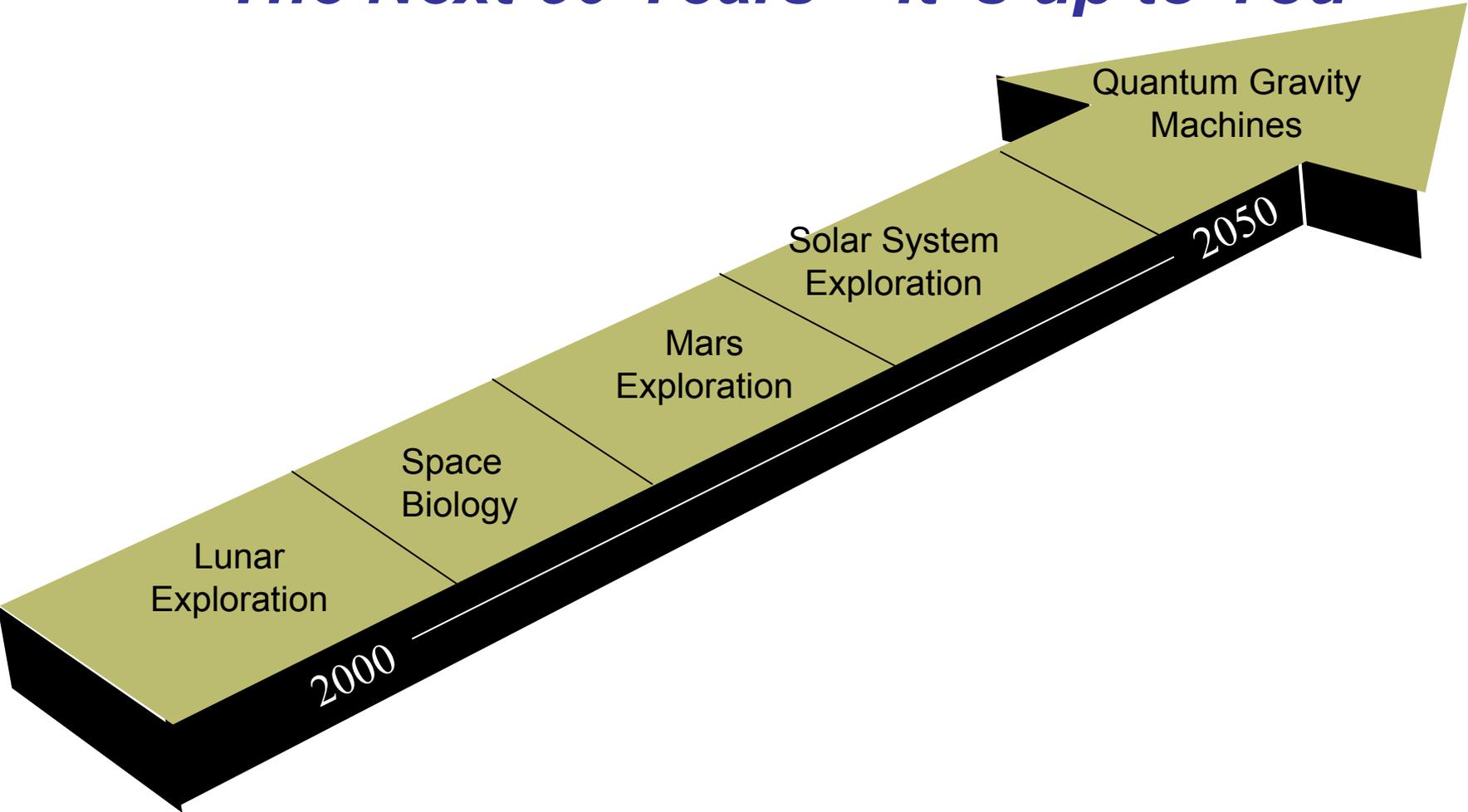
Aero Expo



Ames Academy



# *The Next 50 Years – It's up to You*





National Aeronautics and  
Space Administration



## Purpose

**The purpose of this pre-proposal conference is to provide potential offerors with an opportunity to obtain a better understanding of the Government's requirements.**



## General Guidance

- **These slides are not to be interpreted as a comprehensive description of all requirements of the solicitation.**
- **To the extent there are any inconsistencies between this briefing and the solicitation, the solicitation governs.**
- **Nothing said here today should be construed as a revision unless subsequently confirmed in the Final RFP.**



## General Guidance

- **A communications blackout will be invoked following issuance of the final RFP.**
- **All communications with industry concerning this acquisition will then be with the Contracting Officer only.**
- **The “blackout” period for communication with industry will continue until contract award.**



## Questions

- **Following the presentation, all questions must be presented in writing and will be answered orally as time permits. All questions will be posted with a definitive official answer.**
- **There are Question Forms (5x8 cards) at the sign-in table that may be used to write your questions.**
- **All questions related to the Draft RFP, or this Industry Day shall be submitted in writing no later than November 13, 2012 to:**

**[Jeannette.Albiez@nasa.gov](mailto:Jeannette.Albiez@nasa.gov)**



## Electronic Files

- **Link to FILMSS updates on NASA/ARC Business Opportunities Page:**  
**<http://prod.nais.nasa.gov/cgi-bin/eps/synopsis.cgi?acqid=137043>**
- **The solicitation and any documents related to NNA12412418R, including Interested Parties list, are available at the above website.**
- **These charts and the Industry Day Attendance List will be posted to the above website.**



## E-Mail Notification

- **E-mail notification Tab on NASA/ARC Business Opportunities Page**
  - <http://prod.nais.nasa.gov/cgi-bin/nens/index.cgi>
- **Receive notification based on:**
  - **NASA Center**
  - **Specific acquisition number**
  - **Product or Service Code**



# Freedom of Information Act (FOIA) Requests

- **Direct FOIA requests electronically to: Lubna M. Shirazi at:  
foia@arc.nasa.gov**
- **No proprietary information can be disclosed**
- **URL to NASA ARC FOIA Webpage and Electronic Reading  
Room:  
<http://www.nasa.gov/centers/ames/business/foia/index.html>**



# FILMSS Procurement Information

- **Full and Open Competition**
- **Contract Type: Hybrid contract consisting of a definitive Core requirement (Cost Plus Fixed Fee (CPFF)) with an IDIQ component (CPFF)**
- **NAICS Code: 541712: Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)**
  - Size Standard: 500 employees
- **Task Order type: Performance Based CPFF**

# FILMSS Procurement Information (cont'd)

- **Period of Performance: 5 years**

  - Base: 1 Year

  - Option 1: 1 Year

  - Option 2: 1 Year

  - Option 3: 1 Year

  - Option 4: 1 Year

- **Place of Performance:**

  - The majority of the work will be performed on-site at NASA Ames, but the multidisciplinary nature of the work will require occasional support to be provided at other NASA Centers, principal investigator laboratories, and at such other locations as directed by the Contracting Officer.



## Weighting and Scoring

- **Mission Suitability is significantly more important than Past Performance. Past Performance is approximately equal to Cost. Mission Suitability and Past Performance when combined are significantly more important than Cost.**
- **Mission Suitability subfactors will be assigned adjectival ratings and numerical scores in accordance with the numerical system established in the Final RFP. The overall Mission Suitability Factor will only receive a numerical score.**
- **The other factors (i.e., Past Performance and Cost/Price) are not similarly weighted or scored. Past Performance is assigned a level of confidence rating.**
- **A cost realism analysis will be performed to assess the reasonableness and realism of the proposed costs. It is not numerically scored.**



## Award Without Discussions

- **FAR 52.215-1 and NFS 1815.209 allow for award without discussions.**
- **The Government may award a contract based solely on the initial offers received, without discussion of such offers.**
- **The Government reserves the right to hold discussions if Award on the basis of initial offers is determined not to be in the Government's best interest.**



# Proposal Preparation

- **Proposals should be prepared in accordance with the Final RFP and written amendments, if any.**
- **Ensure that all amendments are acknowledged with proposal submission.**
- **Evaluation of proposals will be in accordance with the Final RFP.**



# Acquisition Background: Small Business Goals

**All Offerors, except small businesses, must complete the portion of the instructions specific to the Small Business Subcontracting Plan. Small businesses are not required to submit Small Business Subcontracting Plans; however, small businesses are required to indicate the amount of effort proposed to be done by a small business either at the prime level or at the first tier subcontract level.**

**All Offerors are required to respond to the Commitment to the Small Business Program.**



# Small Business Goals

- **The Contracting Officer's assessment of appropriate subcontracting goals for this acquisition, expressed as a percent of TOTAL CONTRACT VALUE (basic and all options combined), is as follows:**

• <b>Small Businesses (SB)</b>	<b>30%</b>
• <b>Small Disadvantaged Business (SDB) Concerns</b> (Includes SDB's in represented and under-represented areas*)	<b>5%</b>
• <b>Women Owned Small Business (WOSB) Concerns</b>	<b>10%</b>
• <b>Veteran Owned Small Business (VOSB) Concerns</b>	<b>5%</b>
• <b>Service-Disabled Veteran-Owned Small Business</b> (SDVOSB) Concerns	<b>4%</b>
• <b>HUBZone (HBZ) Small Business Concerns</b>	<b>1%</b>
• <b>Historically Black Colleges and Universities (HBCU)/Minority</b> <b>Institution (MI)</b>	<b>0.5%</b>

## Planned Schedule

- **Draft RFP Released:** **October 25, 2012**
- **Industry Day** **November 8, 2012**
- **Draft RFP Comments Deadline:** **November 13, 2012**
- **Final RFP Release:** **January 4, 2013**
- **Proposal Due:** **February 18, 2013**  
**(45 Days after release of RFP)**
- **Selection:** **June 2013**
- **Date of Award:** **June 2013**



National Aeronautics and  
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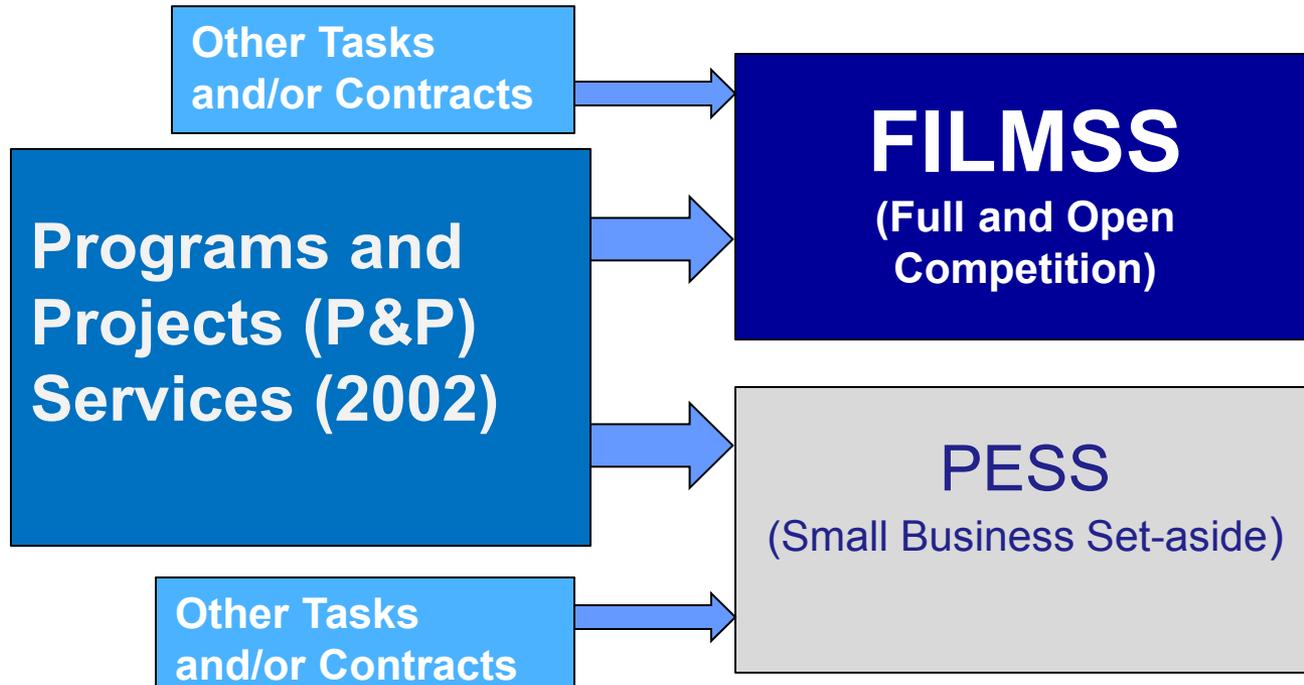


# Ames Research Center





# Acquisition Background





## Statement of Need

**This procurement activity encompasses all phases of mission and project lifecycles and projects. It will support crewed and uncrewed suborbital and space missions, instruments, and bio-sciences research and development efforts; collaborative science programs and virtual communications; ARC and NASA project offices; education and public engagement; science research; and mission and science operations.**

**The work contemplated under this contract will require support for multiple programs and projects concurrently.**



# Office of the Director

Office of the Chief Counsel

NASA Astrobiology Institute

Office of the Center Chief Technologist

NASA Lunar Science Institute

Office of the Chief Engineer

NASA Research Park Office

Office of the Chief Scientist

Diversity and EO Programs Office

Aeronautics Directorate  
Code A

Science Directorate  
Code S

Exploration Technology  
Directorate  
Code T

Programs & Projects  
Directorate  
Code P

Engineering Directorate  
Code R

New Ventures and  
Communications  
Directorate  
Code V

Safety, Environmental &  
Mission Assurance  
Directorate  
Code Q

Center Operations  
Directorate  
Code J

Information Technology  
Directorate  
Code I

Human Capital  
Directorate  
Code H

Office of the Chief  
Financial Officer  
Code C

Agency CFO

## Core Elements

- **Management of all highly diverse requirements for the work to be performed**
- **Project management support functions (e.g., Aeronautics projects, virtual institutes, Kepler)**
- **Development of small scale hardware, payloads, system architectures, and systems engineering (e.g., for International Space Station (ISS), Space Biosciences, space science, Kepler)**
- **Design of laboratory experiments, data analysis and archiving (e.g., International Space Station (ISS) Utilization, Space Biosciences, Kepler)**
- **Virtual communications (e.g., virtual institutes, exploration technology, etc.)**
- **Education and Public Outreach (EPO)**

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## Core Elements (cont'd.)

- **Strategic management and analysis support (e.g., ISS Utilization, Code V)**
- **Support for proposal writing – concept development, technical writing, graphics, etc. – for Ames responses to NASA and external solicitations.**
- **Support for Ames-led competitive processes and reviews (e.g., for the virtual institutes)**
- **Support for workshops, conferences, technical interchange meetings**



## **The IDIQ elements will include:**

**Indefinite Delivery, Indefinite Quantity (IDIQ) will include many of the same functionalities and capabilities as the Core; IDIQ task orders will be negotiated and issued for an increase in the magnitude of requirements over that of the Core. Additionally, IDIQ could include such elements as:**

- Support for the development of innovative partnerships (e.g., help identify potential partners, space act agreements, intellectual property, technology transfer)**
- Facilitate development of commercial space sector**
- Support for Stratospheric Observatory For Infrared Astronomy (SOFIA)**
- Historical documentation and records (e.g., Ames History Office)**



	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>FILMSS Support Requirements Matrix</b>	ISS	Space Biology	Space Bioscience Division	Kepler	Virtual Institute: NASA Astrobiology Institute biology, Lunar Science)	Virtual Institute: NASA Lunar Science Institute biology, Lunar Science)	Aeronautics Projects	Strategic Management & Analysis Division	New Opportunities Center	Ames History Office	Office of Chief Scientist	Office of Protection of Human Research	
Program & Project Support	CORE IDIQ	IDIQ		CORE	CORE IDIQ	CORE IDIQ	CORE	CORE IDIQ	CORE IDIQ				CORE
Spaceflight Project Support	CORE IDIQ	CORE		CORE									
Virtual Com & Collab Support					CORE	CORE	CORE						
Science/Research Support	CORE IDIQ		CORE		CORE	CORE						CORE	CORE
Hardware & Tech Dev Support	CORE	IDIQ	CORE	CORE	CORE	CORE							CORE
Innovative Partnerships Support			CORE		CORE	CORE	CORE						
Strat Planning & Analysis Support	CORE IDIQ	IDIQ	CORE					CORE IDIQ	CORE IDIQ			CORE	
Proposal Development Support			CORE					CORE IDIQ	CORE IDIQ				CORE
Solicitations Support		IDIQ			CORE	CORE							
Educ & Public Outreach Support		IDIQ	CORE	CORE	CORE IDIQ	CORE IDIQ	CORE			CORE			CORE
Workshop, Meeting, Conf Support		IDIQ	CORE		CORE IDIQ	CORE IDIQ	CORE			CORE	CORE		CORE
Data, Doc Mgmt & Archival Support	IDIQ		CORE	CORE	IDIQ	IDIQ	CORE			CORE	CORE		CORE
Subject Matter Expert Support	CORE IDIQ				CORE	CORE							CORE
<b>ESTIMATED CORE FOR FIRST YEAR - SUBJECT TO CHANGE</b>													



# Scope of Work: Project Management Support

(SOW 4.2.1-2)

***Ames has been selected to lead or support NASA projects and missions, and the Center will be competing for new work in the future. Current project management support will go primarily to ISS research, Aeronautics, and Kepler and other missions,.***

Standard tasks for project management include versatile and adaptable multi-functional project teams to support the full mission life-cycle, such as:

- Strategic planning and analysis
- Proposal development
- System design
- Systems engineering
- Milestone tracking, planning, scheduling
- Technical review
- Documentation and data management
- Project plans and presentations support

Also:

- Provide spaceflight project support, primarily for ISS and bioscience research
- Support Aeronautics Projects Office



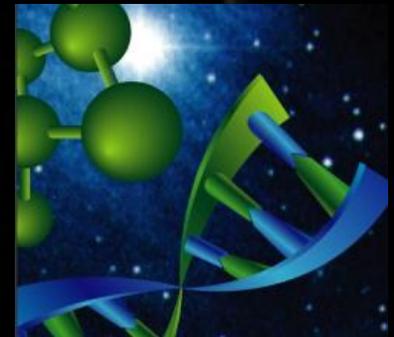
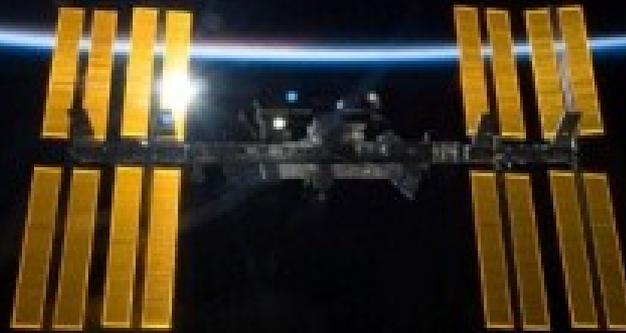


National Aeronautics and  
Space Administration



# Scope of Work: ISS Utilization (SOW 4.2.1-2, 4)

Ames ISS Utilization Office supports the development and utilization of the U.S. portion of the International Space Station (ISS), including the ISS National Laboratory, by enabling technology development and conducting research.



The office is responsible for fundamental elements of research and developing and flying scientific payloads aboard the ISS and in space in order to understand organisms and hardware response to the space environment, improve human health on earth, assess technical feasibility, enable exploration and the expansion of humanity into space, promote commercialization and support education and outreach.



National Aeronautics and  
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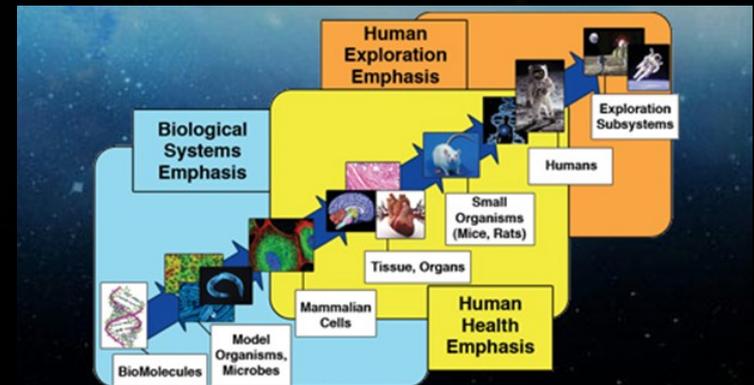
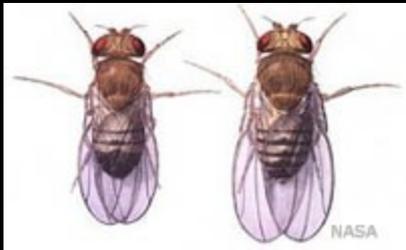
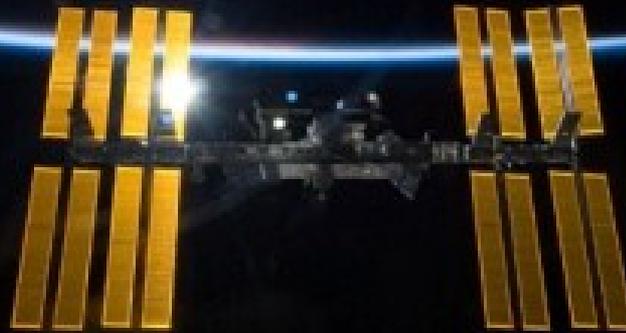
In addition to Standard Tasks, the primary role of FILMSS in this area is to support all phases of the R&D (Technology Readiness Level (TRL) 1-7) and Mission Project effort (Phase A-E) in accordance with NPD 7120.5D and smaller builds or modifications that only have to conform to ISS or specific vehicle safety regulations.

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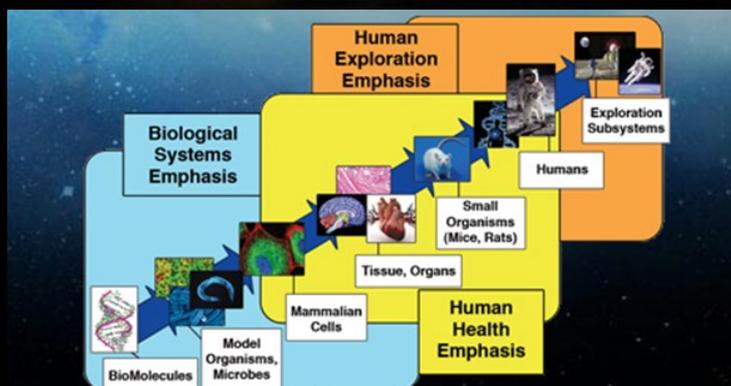
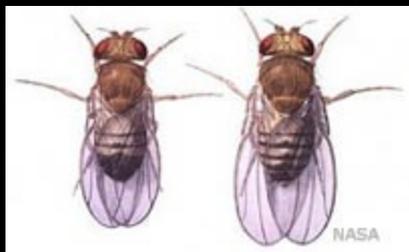
# Scope of Work: Space Biosciences (SOW 4.2.1-2, 4)

The Biosciences Division plans and performs experiments on the ground and in space; issues include handling of biospecimens, cataloging and archiving flight and ground data, ensuring adherence to NASA animal policies, and assessment, development, and testing of advanced technologies. Like the ISS Utilization office, the division supports the development and utilization of the U.S. portion of the ISS.



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In addition to the standard challenges of technology development and payloads operating on orbit and in space, biosciences payloads developed for the ISS and other flight platforms have three major challenges:

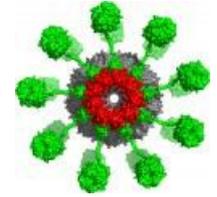
- devices must be bio-compatible with subject organisms
- payloads must fit constraints of the manned or freeflyer vehicle
- sustaining living organisms long term in space

# Scope of Work: Bioethics and Biocompatibility

(SOW 4.2.4)



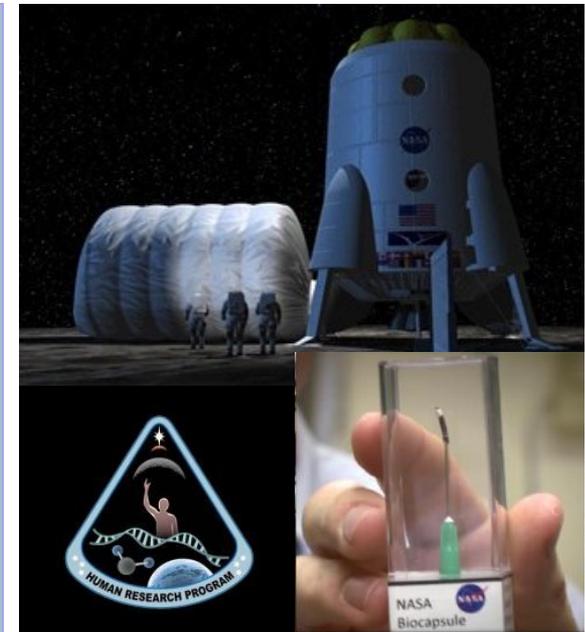
**Unique Project Support Requirements for FILMSS:  
Biosciences and Human Biomedical research & ethics**



*Biosciences Projects*, because they deal with living organisms have special support requirements to assure ethical treatment of test subjects as well as high science yield.

**In addition to standard tasks, the primary role of FILMSS is:**

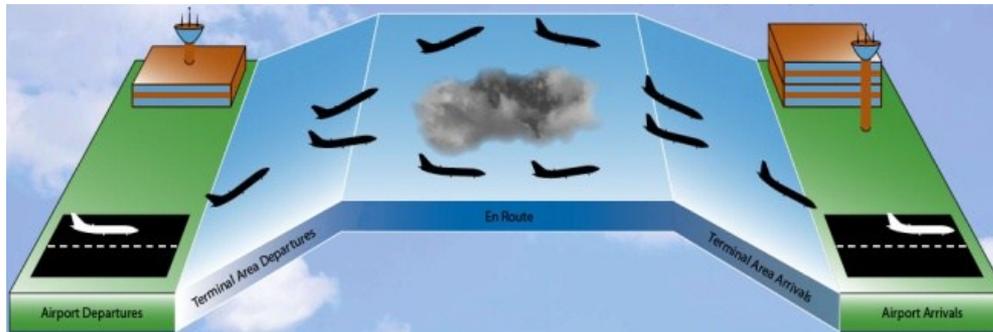
- Development, implementation, and operations associated with space biology and the human research program (HRP) missions and payloads
- Including science integration, experiment requirements definitions/development
- Payload instrumentation
- Hardware development
- Biocompatibility testing
- Ground Testing (acceleration facilities)
- Mission operations
- Post-flight processing.



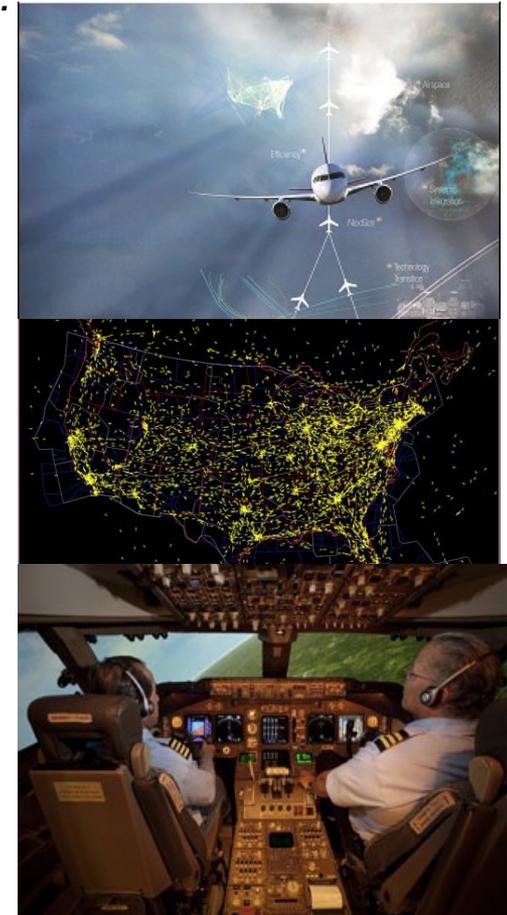
## Scope of Work: Aeronautics SOW 4.2.1

Ames' **Office of Aeronautics** uses ARC's expertise in intelligent systems, high performance computing, simulation and monitoring, advanced aerospace materials and devices, space transportation technology and human factors to **improve the safety and performance of aircraft and Air Traffic Management Systems.**

The primary role of FILMSS in this area is project management and programmatic support for multi-organizational collaborative teams and projects. This requires understanding and expertise unique to aeronautics disciplines, including air traffic control.



**A key element to Aeronautics support: Aeronautics technical products and innovations must be effectively communicated to experts and decision makers for consideration within the aviation community,** such as the Federal Aviation Administration, air traffic control, Joint Planning and Development Office, as well as aerospace companies, such as airframe and avionics manufacturers, as well as airlines and academia.



# Scope of Work: Virtual Communications & Collaboration

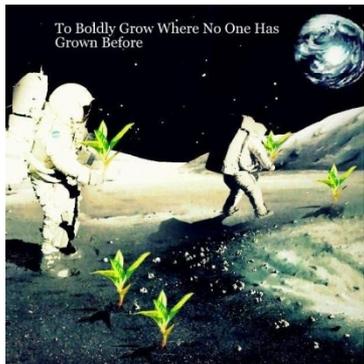
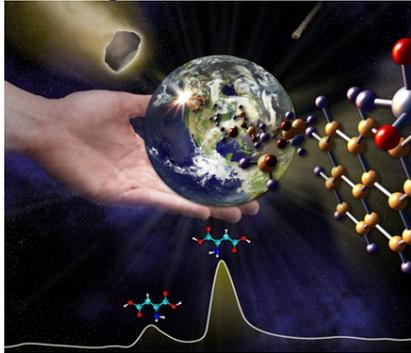
(SOW 4.2.3-4, 9)

**Ames has become an Agency leader in the development and use of virtual communications and collaboration, particularly through the virtual institutes.**

The contractor will:

- Provide expertise and keep Ames on the cutting edge with respect to collaboration technology tools
- Support collaborative science
- Develop collaborative environments enabling remote scientific collaboration
- Support Institute and science meetings
- Support science research

Also, for the various virtual institutes, the contractor will support Ames-managed solicitations.



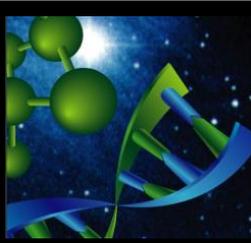
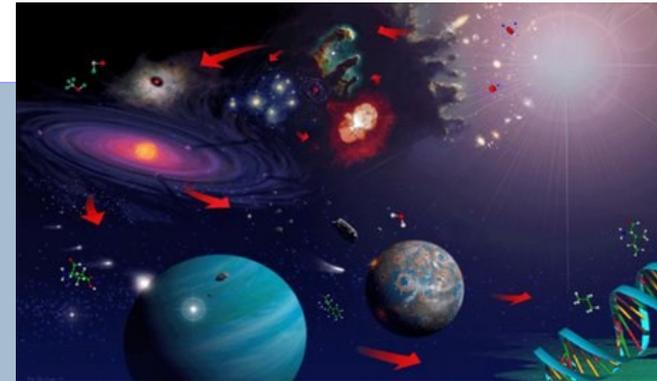


## Scope of Work: NAI (SOW 4.2.3-4, 9)

The *NASA Astrobiology Institute* at the Ames Research Center is lead for the interdisciplinary study of the origins, evolution, distribution and future of life in the universe and requires a comprehensive, integrated understanding of biological, planetary, and cosmic phenomena.

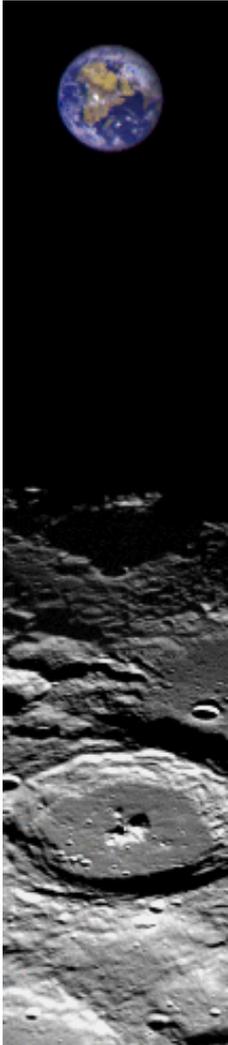
In addition to standard tasks, the primary role of FILMSS is:

- Coordinate end-to-end processes for Institute programs
- Provide science and technical support for field trips and other activities
- Development of international partnerships.
- Development of new collaborative tools
- Provide technical and social organizational support for current and future collaborative tools that promote science over distance, virtual field trips, virtual world systems, online meeting software and videoconferencing systems.
- Support and lead the EPO activities
- Provide virtual institute administrative and operations support
- Provide Institute-related program support for NASA Headquarters programs and divisions.





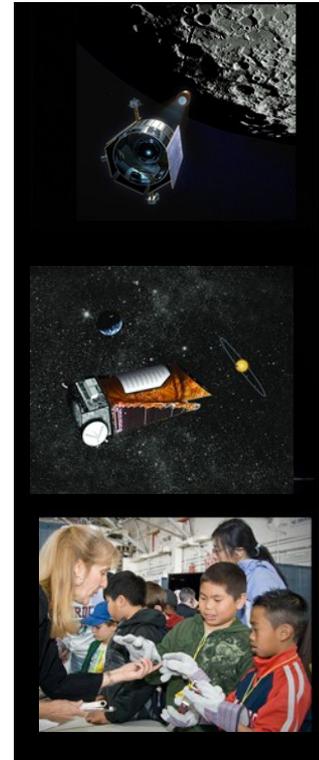
## Scope of Work: NLSI (SOW 4.2.3-4, 9)



The ***NASA Lunar Sciences Institute*** synergizes science and exploration communities of NASA through lunar research. The NLSI brings together competitively selected research teams, international partners, and the broad lunar community to focus on questions of fundamental importance in understanding the formation, evolution, composition and potential of the Moon.

In addition to standard tasks, the primary role of FILMSS is:

- Coordinate end-to-end processes for Institute programs
- Provide science and technical support for field trips and other key activities
- Support of international partnerships
- Provide technical and social organizational support for current and future collaborative tools that promote science over distance, virtual field trips, virtual world systems, online meeting software and videoconferencing systems
- Support and lead the E/PO activities
- Provide virtual institute administrative and operations support
- Provide Institute-related program support for NASA Headquarters programs and divisions



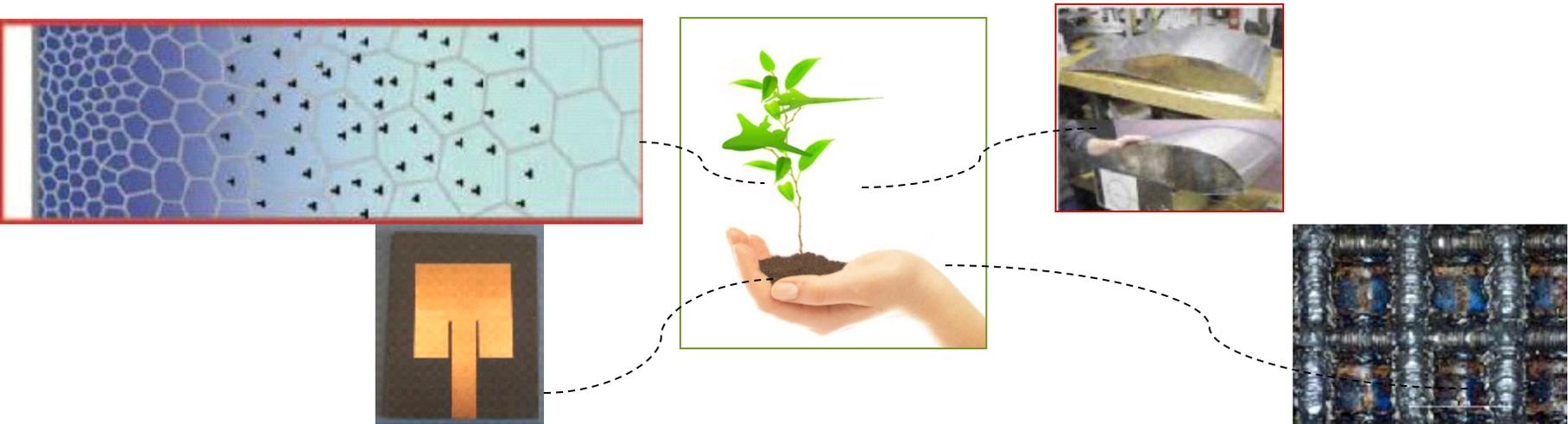
***Changing scope of ... NLSI!***



## Scope of Work: NARI (SOW 4.2.3-4, 9)

The *NASA Aeronautics Research Institute (NARI)* carries out world-class multi-disciplinary research by catalyzing innovative aeronautics research across a range of disciplines and organizations. The Institute identifies research opportunities through internal and external solicitations, challenges, and prizes and through selected collaborative research activities.

NARI focuses on technology development, particularly the development of low TRL technologies and innovative concepts.





# Scope of Work: Hardware and Technology Development

(SOW 4.2.5-6)



Several Ames offices are involved in the development of innovative hardware, architectures, instruments, and technologies, including the ISS Utilization Office, the Space Biosciences Division, and the Chief Technologist's office. Ames disseminates these technologies to industry through such programs as Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. Ames also supports the development of the commercial space sector.

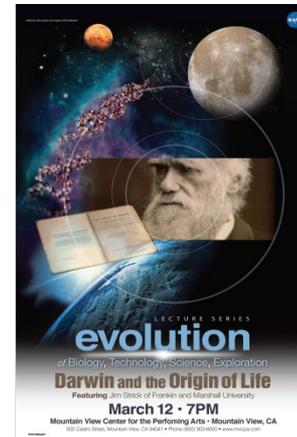
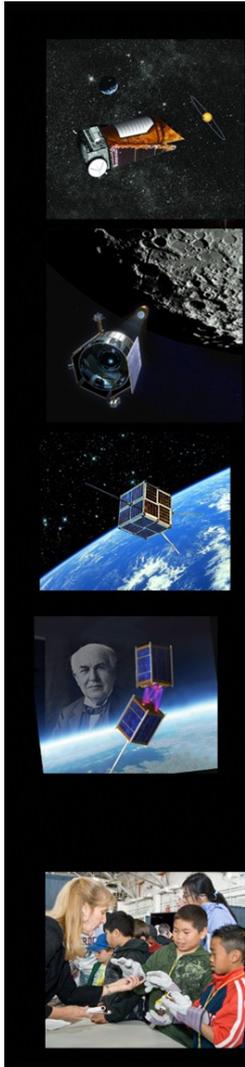
All this will involve identifying, developing, and providing potential innovative collaborative opportunities between the various commercial partnerships, institute consortiums, academia, industries, and Ames programs.



# Scope of Work: Education and Public Outreach - EPO (SOW 4.2.10)

**EPO includes:**

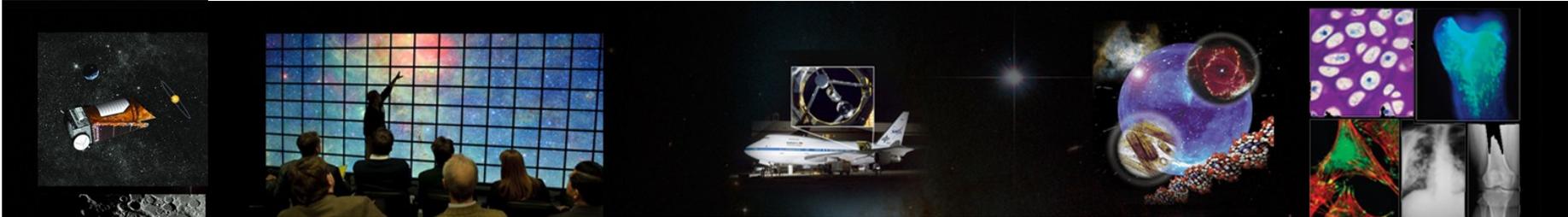
- Public affairs plans for Ames-led missions
- Dissemination of information about Ames projects
- Development of science, education, and outreach tools
- The Ames Academies
- Outreach events, scientific meetings, education conferences, and public meetings
- Coordination of education activities within and outside Ames Research Center





# Scope of Work - Broad Center Support

(SOW 4.2.7, 8, 11, 12)



***Innovative Partnerships, Proposals and Functional Offices support all Ames offices and activities.***

In addition to standard tasks, the primary role of FILMSS is:

- Database solutions for portfolio development in support of collaborations
- Proposal development, writing, editing, technical review, compliance checking
- Support to the Office of the Chief Scientist and the History Office in conferences, research, fact checking, writing and graphics
- Provide support for exploring, elucidating and preserving the scientific and engineering experience of the Center
- Assist Ames leadership with strategic planning and analysis
- Facilitate workforce alignment and connectivity through support for documents (e.g., Center At A Glance)





# Organizations Supported by FILMSS:

- **Office of the Center Director (Code D)**
  - **NASA Astrobiology Institute**  
(<http://astrobiology.nasa.gov/nai/>)
  - **NASA Lunar Science Institute**  
(<http://lunarscience.nasa.gov/>)
  - **ISS Utilization Office**
  - **Office of the Director**
  - **Office of Chief Scientist**
  - **History Office**
  - **Office of the Chief Technologist**

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**Blue Font signifies moderate amount of work**

**Green Font signifies small amount of work**



# Organizations Supported by FILMSS:

- **Office of New Ventures and Communications (Code V)**  
and related Education and Public Outreach
  - **Office of Education**
  - **New Opportunities Center**
  - **Robotics (Education)**
  - **Strategic Management & Analysis Division**

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# Organizations Supported by FILMSS:

- **Science Directorate (Code S)** (<http://space.arc.nasa.gov>)
  - **Space Biosciences Division**
  - **Space Science and Astrobiology Division**
  - **Earth Science and Astrobiology Team**
- **Programs and Projects Directorate (Code P)**
  - **Kepler**
  - **SOFIA**

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# Organizations Supported by FILMSS:

- **Aeronautics Directorate (Code A)**
  - **Aeronautics Projects Office**
  - **NASA Aeronautics Research Institute (NARI)**
  
- **Safety, Environmental, and Mission Assurance Directorate (Code Q)**
  - **Ames Management System**

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National Aeronautics and  
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# Questions?