



## President's Report

June 2026



*Class of 2025 retirees' group photo*

THANK YOU, LAA for leading the charge for this celebration. Langley is grateful for your support and continued dedication to the remarkable employees we call friends and family! Looking forward to our next opportunity to get together.”

Many, many thanks to everyone who helped make this a great success. LAA members are the BEST! THANK YOU Jill Marlowe, Rick Ross, Maria Georgieva, Eileen Nelson, Rich Antcliff, Christina Xavier-Moats, Sharon Monica Jones, Lil Richwine, Amy Radford, Odilyn Luck, Susan McClain, Ray Rhew, Dave Young, Doug Arbuckle, Dick Hueschen, Mike Cisewski, Elizabeth Quin-

*By Kathy Ferrare, President*

During these past few months, LAA members volunteered their time, shared their experiences, and expressed well wishes to both the younger generation and the young at heart!

The Langley Aerial drone competition provided a first-hand look at our younger future space enthusiasts! Our future looks very *bright* 💡! The LAA was there in the middle of the excitement of drones flying around the Reid center by helping with check-in, refereeing, pit administration, and lunch assistance! Thank you to Sharon Monica Jones, Louis Glaab, Lil Richwine, Linda Bangert, Mary DiJoseph, Dave Hinton, Bird Taylor, John Berry, and Christina Moats-Xavier.

In May, LAA joined with NASA Langley again to celebrate the 2,612 combined years of service from 74 of our Class of 2025 retirees. This entire process was both uplifting and inspiring. It was an honor to be

a part of the celebration! You can view the retirement album photos on NASA's Flickr page at <https://flic.kr/s/aHBqjCVDEV>.

Being a participant on the Retirement Celebration team brought me back to my SAGE III Meteor project days when I coordinated schedules, produced slides, and received many “late night” emails! Creating and coordinating this type of event takes time, effort, and **many helping hands**. I am so proud of the many LAA members and Langley employees for jumping right in to make this event one that the retirees will treasure forever, based on the many thank-you notes we received.

A note from Center Director, Dr. Trina Dyal—“What an incredible day to celebrate our retirees. I too heard nothing but excitement and gratitude at being able to come together to celebrate folks and their contributions. It is so hard to hold it together when you see great friends retiring.

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## 2026 LAA OFFICERS

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**Vice President & Programs Chair**

Susan McClain

**Treasurer**

Ray Rhew

**Secretary**

Jill Marlowe

**Communications Officer**

Richard Hueschen

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**Nominating Committee**

Susan McClain

**Hall of Honor Committee**

Mary Wusk

**Website & Publications Committee**

Rick Ross

Amy Radford

**IT Committee**

Roman Paryz

Dan Palumbo

Rick Ross

Geoff Tennille

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Eileen Nelson and Mariya Georgieva

**Past President**

Dan Palumbo

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**Class of 2027**

Rich Antcliff

Tony Pototzky

Mary DiJoseph

Ray Rhew

Susan McClain

Geoff Tennille

Craig Ohlhorst

**Class of 2028**

Mark Ballin

Roman Paryz

Charlie Dunton

Liliana Richwine

Odilyn Luck

Eric Rissling

**Class of 2029**

Mike Fremaux

Amy Radford

Wes Goodman

Ray Whipple

Jill Marlowe

Dave Young

Neil O'Connor

## President's Report

*Continued from page 1*



*Class of 2025 Retirement Celebration was well attended*

to, Frank Quinto, Charlie Dunton, Mary DiJoseph, Dave Hinton, William Hodges, and Lucia Lee.

Our requests for help don't always involve an extensive amount of time. Ms. Marilyn Ogburn has requested help in finding information about a NASA film related to the Viking project. Here is a description of the film content: "Viking '75 Surface Sampler"; "HERMAN (Highly Excitable Regurgitating Martian Agate Naber)"; Baseline Collector Head, Acquisition in Lunar Nominal Mode, Backhoe Sequence, Sample Processing, Magnetic Array on the Backhoe. Mr. Richard (Dick) Hueschen sent an email to LAA members on May 20, 2026, with additional information

and Marilyn's contact information.

Interested in sharing your musical talent? Join the NASA Langley Orchestra for a one-time performance in celebration of our nation's 250<sup>th</sup> anniversary. A RSVP request was sent out by Richard (Dick) Hueschen on May 23<sup>rd</sup>. If you are interested in performing, please RSVP by June 19<sup>th</sup> by filling out the Microsoft form: [Musicians Needed for the NASA Langley Orchestra RSVP 6/19 – Fill out form.](#) ♦

*"No act of kindness,  
no matter how small,  
is ever wasted."  
— Aesop*



*Special coins and certificates for the retirees*

## Vice President's Report

*By Susan, McClain, Vice President and Programs Chair*

I am excited to announce our upcoming presenters—but also anxious to hear from you on topics you would be interested in hearing about at the LAA. Please reach out to the Programs Committee, including Neil O'Connor and Sharon Monica Jones, if you have recommendations.

In March, the LAA welcomed Dr. Trina Dyal, Acting Center Director of NASA Langley Research Center, who provided an update on the state of NASA Langley, as well as opportunities for the LAA to support the Center.

In April, our own Rick Ross, Committee Chair for Website and Publications, presented “Charlatans, Swindlers and Bilks,” which had lots of great tips for protecting yourself and your data. I immediately changed some settings on my iPhone based on Rick's presentation.

In May, the LAA welcomed Lori Ozoroski, Program Manager for Commercial Supersonic Technology Program Manager, who provided an update on

the X-59 Quesst supersonic low-boom test flights!

We have a great slate of presenters and presentations coming up:

- June 9—Dr. Kevin Marlowe will present on “Using AI to power your retirement.”
- July 14—LAA's annual picnic. More details to come.
- August 11—Stephanie Letourneau from the Wetlands Watch organization will be presenting on their efforts on their “mission is to enhance natural resilience, bolster community adaptation efforts, and protect and restore wetlands throughout Virginia.”
- September 8—Mr. Allen Kilgore, Deputy Center Director, will provide an update on the status of the Center.

We have planned speakers through the end of the year. ♦

## Membership Update

*By Amy Radford, Membership Chair*

As of early May, the LAA continues to grow and thrive, with 296 active members. We are pleased to welcome 29 new members who have joined the organization this year.

A special thank-you to the badge holders who transitioned to the new Center Activity badges in April. While we encountered a few minor issues along the way, everything is now working smoothly. We sincerely appreciate everyone's patience and cooperation as we worked through the transition.

The Membership Committee has made meaningful progress toward its goal of enhancing and streamlining the application and badging processes. A new electronic application form, using Microsoft Forms, has been created and successfully tested. This updated form is scheduled for rollout in May, following the completion of updated instructions and process documentation on the LAA website.

This improvement represents a significant step forward for both prospective members and current Board members. The new form is simple to complete, eliminates unnecessary steps, and no longer requires applicants to create emails or attach a file. This change improves the overall user experience, reduces administrative oversight and minimizes security risks associated with email attachments. We are excited to have Cody Flowers (Data Analytics Analyst) share his expertise as we develop additional modules and more efficient workflows to further streamline our processes.

If you have suggestions for further improvements related to membership applications, badging, or recruiting, please feel free to share your ideas. You may contact me, Dave Hinton, or Bill Tomek at any time—we welcome your input and engagement! ♦

## LAA Financial Status—Going Strong in 2026

*By Ray Rhew, Treasurer*

The financial status of the organization is strong and well positioned to execute our 2026 spending plan. We opened a new account to take a small step in improving the return on our funds. Yvonne Delapenta recently completed the 2025 audit of our accounts. There were only minor findings that have already been corrected or implemented. Yvonne was very thorough and provided great feedback to improve our process. I can't thank her enough for her time and effort performing the audit. And, she was great to work with, too!

We initiated an ad hoc committee to develop a process for researching and selecting opportunities to donate LAA funds that align with our mission. This includes reviewing our budget expenditures in detail, proposing possible fund sources other than dues, and proposing donation levels. A draft process and potential donations for 2026 will be discussed at the June Board meeting.

A big thank-you to Dave Young, Bill Tomek, and Rick Ross for volunteering for this committee! ♦

## VIKING ANNIVERSARY CELEBRATION ACTIVITIES

The Langley Alumni Association (LAA) is cordially invited to attend a Viking Anniversary celebration on Thursday, July 23<sup>rd</sup>.

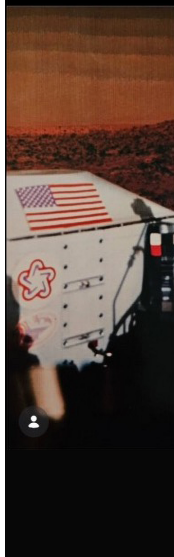
NASA Langley is holding a small symposium, featuring internal speakers who will focus on historical Viking content, as well as a look toward future NASA missions. The symposium will be held from 2:00–4:00 pm in the Reid Conference Center.

Immediately following the speakers, participants are encouraged to attend Trivia at Afterburners for Viking-themed questions and games. No RSVP is needed, and all LAA members must be badged to gain access to the Center. Additional information on badging will be distributed to current LAA members closer to the event date.

— Eileen Nelson  
*Office of the Director  
NASA Langley Research Center*

## Viking - 50 Years On Mars

Join Virginia Air & Space Science Center  
American Institute of Astronautics & Aeronautics (AIAA)  
The Viking Mars Missions Education & Preservation Project  
**July 18, 2026**



VIRGINIA AIR & SPACE  
SCIENCE CENTER   
NASA LANGLEY VISITOR CENTER



10:00 am – 4:00 pm  
Open to the public



**Celebrating NASA Langley Research Centers  
Viking mission, a milestone in 250 years of  
American Mars exploration achievements**

**Hosted by Virginia Air & Space Science Center  
600 Settlers Landing Rd., Hampton, VA 23669**

Visitors will enjoy meeting and attending talks with past and current Space Exploration Leaders and real Viking Mission Team Members who served on the first mission to Mars' surface in 1976. Government and industry experts will share exciting work on future missions and students from institutions around the country will also share their research and experience interning at NASA's leading research facilities.

### Press Contacts

American Institute of Astronautics & Aeronautics (AIAA):  
[patriciarevolinsky@gmail.com](mailto:patriciarevolinsky@gmail.com)

Virginia Air & Space Science Center: [mferebee@vasc.org](mailto:mferebee@vasc.org)

The Viking Mars Missions Education & Preservation Project:  
[info@thevikingpreservationproject.org](mailto:info@thevikingpreservationproject.org)

### Viking Mission Contributors

Reach out to us to hear about a special July 18<sup>th</sup> activity for you!

[info@thevikingpreservationproject.org](mailto:info@thevikingpreservationproject.org)

## Mystery Photo Quiz

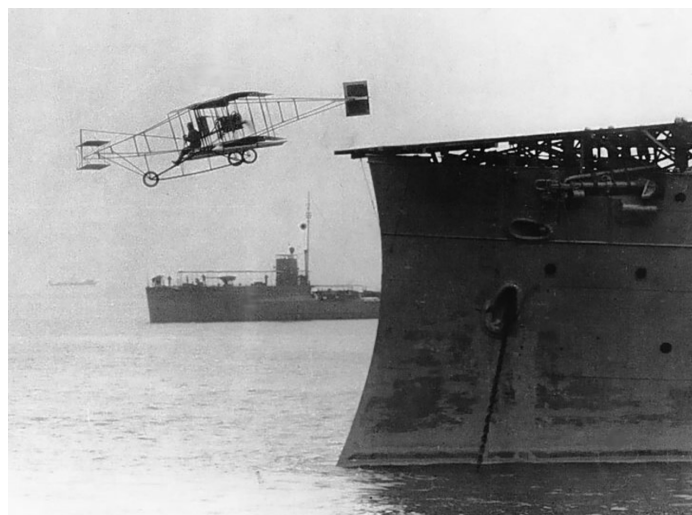
By Bobby Berrier

Test your knowledge by answering the following questions about this photograph.

1. What event does this photograph depict?
2. Where did it occur?
3. What problem can you discern from the photograph?

Send your answers to Bobby Berrier at [b.berrier@cox.net](mailto:b.berrier@cox.net).

The answers to these questions and the quiz results will be provided in the next LAA newsletter. ♦



## Hall of Honor Class of 2027

By Mary Beth Wusk, Hall of Honor Chair

The NASA Langley and Langley Alumni Association (LAA) Hall of Honor Committee has officially begun preparations for the next induction cycle, continuing its tradition of recognizing individuals whose contributions have had a lasting impact on aerospace and the Langley legacy.

Since its inception, the Hall of Honor has inducted 54 distinguished honorees across three classes (2015, 2017, and 2022). Maintaining its established five-year cadence, the committee is now focused on delivering a successful Class of 2027.

Our current efforts are centered on refining the nomination criteria and process. Building on recommendations from the Class of 2022, the committee is reviewing eligibility re-

quirements and nomination guidance to ensure clarity, consistency, and alignment with the Hall of Honor's mission. Updates to the online nomination form and submission process are underway, with an emphasis on streamlining data collection and enhancing accessibility.

The committee structure has been formalized to include representatives from NASA Langley, the LAA, and Hampton Roads partners, ensuring a diverse range of perspectives and expertise. Key responsibilities include evaluating nominations, updating operating guidelines, leading outreach and promotion efforts, and planning the induction event.

Several important milestones have already been completed, including a

meeting with the Langley Center Director on April 8 and the kickoff meeting of the Hall of Honor Operations Committee on April 14. Upcoming activities include team coordination meetings, marketing and promotion planning, and engagement with the Selection Committee.

The electronic nomination form is scheduled to go live on September 1 on the LAA website, marking the official start of the nomination period.

The committee remains committed to honoring individuals whose achievements have fundamentally advanced aerospace science, engineering, and mission support—ensuring their legacy continues to inspire future generations. ♦

## Our Nation's First Coordinate System

By Chuck Byvik

We were a backwoods ragtag group of colonies subservient to a European empire until becoming a nation in 1776. The forefathers began to establish a government based on our Constitution to manage this new federation as well as represent the national interests to the foreign powers. In addition to the usual bureaucratic institutions such as Departments of State, of Treasure, of Defense, Thomas Jefferson considered it important to have our own national prime meridian. In this period, many of the capitals in Europe and Asia had their own prime meridians: a line of longitude running from the capital to the north pole. This line was the reference coordinate for time of day, maps, and charts for each country. Jefferson's desire for our own prime meridian was a symbol that our young republic was an equal among the nations of the world.

The marker for this prime meridian is located a few steps from the Washington Monument and called Jefferson Pier. There are no signs describing this pier and has become a minor and mostly forgotten symbol of our national sovereignty. However, it was the origin of our nation's first coordinate system. The east/west groove on top is the axis that runs to the Capitol and the Lincoln Memorial. The north/south groove aligns with the White House and Jefferson



Jefferson Pier, looking west, with Lincoln Monument in the distance

Memorial. The inscription on the granite marker reads

POSITION OF JEFFERSON  
PIER ERECTED DEC. 18, 1804.  
RECOVERED AND RE-ERECTED  
DEC. 2, 1889.

Late in the 19<sup>th</sup> century, many nations agreed to a single prime meridian through Greenwich, England, and the Jefferson Pier became history. ♦

## How NASA Langley Helped Preserve the Charters of Freedom

*By Dr. Joel S. Levine, Research Professor, Department of Applied Science, William and Mary*

As we are getting ready to celebrate our country's 250<sup>th</sup> birthday on July 4, 2026, it is a good time to recall how Langley researchers and Langley-developed technology assisted the National Archives and Records Administration (NARA) and the National Institute of Standards and Technology (NIST) in the preservation of the Declaration of Independence, the Constitution, and the Bill of Rights, collectively called "The Charters of Freedom."

The story begins on July 28, 1998, when I received a telephone call at my desk at the NASA Langley Research Center from Ms. Margaret Kelly, a chemist at NARA, a person that I did not know and had never spoken to before. Ms. Kelly told me a story that at first, I thought was a practical joke. After about an hour on the telephone with Ms. Kelly, I told her that I am not sure that this is a legitimate telephone call and to confirm that it is, please send me a fax on NARA letterhead briefly summarizing our discussion. About an hour later, the fax from Ms. Kelly arrived in the office of my secretary. Ms. Kelly invited me to visit the NARA Rotunda in Washington, DC, to examine a series of mysterious tiny white flakes that had appeared on the Charter documents over the last few years and were increasing in number with time. NARA was so concerned about these tiny white flakes of unknown origin on the Charters of Freedom that they directed NIST to manufacture seven brand-new encasements for the Charter documents. The origin and cause of these tiny white flakes were unknown to NARA and NIST. Even after holding several workshops to look for explanations of this puzzling phenomena, there was still no definitive answer to their origin.

After I received the NARA telephone and subsequent fax, I set up an ap-

pointment with Langley Director, Dr. Jeremiah Creedon, to brief him on this interesting request from NARA. Dr. Creedon was very interested and wanted Langley to assist in trying to solve this problem. Dr. Creedon gave me a Langley job order number to support Langley participation in this activity and wished me good luck on this new project. With Langley job order in hand, I asked about a dozen Langley scientists, engineers and technicians that I knew and worked with to join the NASA Langley Charters of Freedom Team (see Table 1).

In 1951 and 1952, the Charters of Freedom were hermetically sealed in glass encasements manufactured by the National Bureau of Standards, the predecessor of NIST, at the direction of President Truman and went on public display in the Rotunda of the NARA building in Washington, DC. (Reference 1). The Charters of Freedom consist of the following encasements: four pages for the Constitution, plus a one-page letter of transmittal, signed by George Washington, president of the Continental Congress and one encasement each for the Declaration of Independence and the Bill of Rights. During the sealing of a document in its encasement, backing paper was placed on the bottom piece of encasement glass, then the document was placed on the backing paper. The document was covered then by a loose piece of glass for protection and to keep the document flat. During the process of sealing the documents, the air in the encasement was totally evacuated and replaced with chemically inert helium gas to protect the integrity of the Charters, since air contains several chemically-active compounds that may harm the parchment (animal skin) documents. Since the Charter documents are parchments, NARA and NIST decided to add a small amount of water vapor to the

helium atmosphere of each encasement to keep the documents from drying out and cracking. The amount of water vapor added to each encasement corresponded to relative humidity between 25% and 35% at the constant controlled temperature that the encasements would be exposed to in the Rotunda of the NARA building (Reference 1).

NARA asked the NASA Langley researchers to try to answer two key questions: (1) After 50 years sealed in the encasement, did the helium leak out of the encasement or diffuse through the glass since glass is porous on a molecular scale, and, (2) What was the water vapor content or relative humidity of the encasement. Both of these questions had to be answered using non-invasive gas measurement techniques since the encasements containing the documents were hermetically sealed. Obtaining these measurements were very challenging since the atmosphere of the encasement above the documents was only several millimeters thick.

To obtain the two measurements that NARA requested, the NASA Langley team used a laser spectrometer developed by Glen Sachse and his team originally designed to obtain aircraft measurements of water vapor in the atmosphere. The laser spectrometer measured water vapor by its absorption and helium by its pressure broadening effect (Reference 2). James West, Cecil Burkett, and Joel Levine developed a new non-invasive technique to measure water vapor in the sealed encasement called the "cooling/condensation" technique (Reference 3).

The NASA Langley team found that the helium content of five of the encasements remained at close to 100% (pages 1, 2, and 4 of the Constitution, the Declaration of Independence

and the Bill of Rights) and there was a small loss of some helium in the Transmittal Letter encasement (helium was 76% based laser spectrometer measurements) and page 3 of the Constitution encasement (helium was 84% based on laser spectrometer measurements). The team made the very surprising discovery that the water vapor content of all seven encasements had significantly increased since they were hermetically sealed in 1950. The relative humidity in the Charters were measured in the range of 55% to 61%, significantly higher than the original encasement relative humidity of between 25% to 35% (Reference 4).

NARA and NIST unsealed the seven encasements, removed the documents from their original encasements and sealed the documents in the brand-new NIST-manufactured encasements. Before the documents were removed from their original encasements, Langley collected samples of the encasement atmosphere for analysis in the Langley Gas Chromatograph (GC) Laboratory by Patty Davis, Jeff Jordon, Billy Upchurch, and Jim West. The GC measurements confirmed the results of the earlier Langley non-invasive measurement obtained with the laser spectrometer and “cooling/condensation” method for the concentration of helium and the relative humidity in the encasements. All seven newly re-encased Charter documents went back on display in the rotunda of the NARA building on July 5, 2003. President Clinton spoke at the dedication ceremony of the new encasements.

NARA and NIST believe that the significant increase in the water vapor content of all seven encasements resulted from the outgassing of water vapor originally absorbed in the backing paper in each encasement used to protect the documents from direct contact with the glass. NARA and NIST also attribute the formation of the tiny white flakes forming in the encasement on sheet of glass covering the documents to the leaching out of alkaline material

in the glass as a result of a chemical reaction between the glass and the higher than expected water vapor content of the encasements. The contributions of the NASA Langley team were reported in an article by NARA (Reference 5).

Each year, the Charters of Freedom are viewed by more than a million visitors. The NASA Langley Charters of Freedom Team was given a unique research opportunity by the National Archives and Records Administration to apply NASA expertise and technology to a non-aerospace problem of national interest and importance. This point was highlighted in a letter that John W. Carlin, Archivist of the United States, wrote to Daniel S. Goldin, NASA Administrator, on February 18, 1999. Mr. Carlin concludes his letter with the following comment:

“Please accept our gratitude and thanks on behalf of these dedicated scientists. Their contributions to the Charters of Freedom re-encasement project represent a wonderful transfer of NASA technology to a non-aerospace program of national importance.”

### Table 1. NASA Langley Charters of Freedom Team

Dr. Joel S. Levine, Team Leader  
 Cecil G. Burkett<sup>2</sup>  
 Patricia P. Davis<sup>3</sup>  
 Dr. Glenn S. Diskin<sup>1</sup>  
 Joseph C. Hickman<sup>1</sup>  
 Dr. Jeffrey D. Jordan<sup>3</sup>  
 Dr. James R. Podolske<sup>1,4</sup>  
 Glen W. Sachse<sup>1</sup>  
 Thomas A. Slate<sup>1,5</sup>  
 Dr. George F. Tucker<sup>1,6</sup>  
 Dr. Billy T. Upchurch<sup>3</sup>  
 James W. West<sup>2,3</sup>

<sup>1</sup> Laser Spectroscopy Team

<sup>2</sup> Cooling Condensation Team

<sup>3</sup> Gas Chromatography Team

<sup>4</sup> NASA Ames Research Center

<sup>5</sup> Swales Aerospace

<sup>6</sup> The Sage Colleges

### References

1. National Bureau of Standards, 1951: Preservation of the Declaration of Independence and the Constitution of the United States. NBS Circular 505.
2. Sachse, G. W., G. S. Diskin, T. A. Slate, G. F. Tucker, J. C. Hickman, J. R. Podolske and M. Kelly, 2002: Diode Laser Analysis of the Sealed Enclosures of the Charters of Freedom. Proceedings Volume 4817, Diode Lasers and Applications in Atmospheric Sensing, SPIE, Seattle, WA. <https://doi.org/10.1117/12.453764>.
3. West, J. W., C. G. Burkett, and J. S. Levine, 2002: The Relative Humidity of the Atmosphere in the Encasements Containing the Declaration of Independence, the U.S. Constitution (Pages 1 and 4), and the Bill of Rights. NASA Technical Memorandum NASA/TM-2002-211433, NASA, Washington, DC.
4. Levine, J. S., C. G. Burkett, P. P. Davis, G. S. Diskin, J. C. Hickman, J. D. Jordan, G. W. Sachse, J. R. Podolske, T. A. Slate, G. F. Tucker, B. T. Upchurch and J. W. West, 2002: The Chemical Composition of the Atmosphere in the Encasements Containing the Charters of Freedom of the United States of America. A History of Encasements: Technology Preserving the Charters of Freedom, National Institutes of Standards and Technology, Gaithersburg, MD, April 23, 2002.
5. Nicholson, C. and M. L. Ritzenthaler, 2002: Tales from the Vault: Exposed to Air After Fifty Years! Common-Place: The Interactive Journal of Early American Life Special Issue on the Constitution, Vol. 2, No. 4, July 2002. <https://commonplace.online/article/exposed-to-air-after-fifty-years/> ♦

## The Apollo Program: The Contributions of the NASA Langley Research Center

By Dr. Joel S. Levine, Research Professor,  
Department of Applied Science, William and Mary

From an article by Dr. Joel Levine, available at <https://bis-space.com/shop/product/the-apollo-program-the-contributions-of-the-nasa-langley-research-center>.

Summarized by Rick Ross, Newsletter Editor

NASA Langley Research Center (LaRC) made many important contributions to the Apollo program. In President John F. Kennedy's address to Congress, he boldly stated "I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth. No single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space; and none will be so difficult or expensive to accomplish." NASA Langley stepped up to meet this challenge.

In 1915, Congress created the National Advisory Council on Aeronautics (NACA), and Langley was established as the first civil aeronautics research laboratory. In 1958, just after the formation of NASA, the Space Task Group (STG) was formed at Langley. The STG established teams of human computers, as famously highlighted in the book *Hidden Figures* by Margo Lee Shetterly and the movie of the same name. The Katherine G. Johnson Computational Facility honors this important Langley contribution.

Langley engineer John Houbolt developed the innovative but challenging lunar orbit rendezvous concept, which was demonstrated during the Gemini program and selected for use on the Apollo missions. The design reduced costs and served as a "lifeboat" during the fated flight of Apollo 13.

Langley constructed the Rendezvous Docking Simulator in 1963 for testing the lunar orbit rendezvous maneuvers

and for training Gemini and Apollo astronauts.

Langley also developed Project FIRE (Flight Investigation Re-entry Environment) to determine the effects of atmospheric heating upon re-entry. Project FIRE testing was completed at three of Langley's wind tunnels from 1964 to 1965.

The gantry at Langley's Lunar Landing Research Facility (LLRF), now known as the Landing and Impact Research Facility (LandIR), was constructed in 1965 to simulate the moon's gravity to train astronauts for descent and landing on the moon.

Aerodynamic characteristics of the Apollo-Saturn launch vehicle were tested as several of Langley's wind tunnels. An electric arc heater was used to test the heat shield materials.

From 1966 to 1967, five lunar orbiter missions conducted high-resolution imagery of the moon's surface to identify 20 potential landing sites, photographing 99% of the lunar surface.

Without these important contributions by the NASA Langley Research Center, the Apollo missions would not have been possible. In 2015, the NACA/NASA Langley Hall of Honor (HoH) was established to honor scientists, engineers, technologists, and managers who made significant contributions to aerospace development. Plaques on the wall of the NACA room—where the LAA meets—honor these individuals and their contributions. (See related article on page 4.) ♦

## Robert Goddard: Father of the Modern Rocket



Robert Hutchings Goddard – US Airmail  
Scott No. C69, October 5, 1964,  
Roswell, New Mexico  
*The Father of the Modern Rocket*

By Geoff Tennille

The airmail stamp honoring Robert Goddard—the father of the modern rocket—was issued on the 82<sup>nd</sup> anniversary of his birth in Roswell, New Mexico, where Goddard performed a significant portion of research in rocket flight.

In 1907, in a cloud of smoke from a powder rocket fired in the basement of the Worcester Polytechnic Institute physics building, Goddard first obtained public notice. School officials took an immediate interest in the work of student Goddard. The school's administration, to their credit, did not expel him. He thus began his lifetime of dedicated research.

Primitive as the achievement of the Wright Brothers, Goddard's rockets made little impression on government officials. Modest subsidies from the Smithsonian Institution and the Daniel Guggenheim Foundation, as well as leaves of absence granted him by the Worcester Polytechnic Institute of Clark University, enabled Goddard to sustain his devoted research and testing.

Goddard received two U.S. patents. One was for a rocket using liquid fuel, while the other was for a two- or three-stage rocket using solid fuel. ♦

## VASBA Lunch and Learn at Virginia Space Grant Consortium

By Jack Schlank and K. Couch



VASBA Rosemary Baize presentation at VSGC



Rosemary Baize receiving Certificate of Appreciation from VASBA President Dave Bowles

On March 26 VASBA hosted another one of our lunch and learn events. It was held at the Virginia Space Grant Consortium (VSGC) offices and the featured speaker was Rosemary Baize. Rosemary is the former Director of the Strategic Partnerships Office at LaRC, and is now the owner of Altair Strategies, LLC. Her well-attended presentation was entitled “Aerospace - Propelling Hampton Roads into the Future”. Rosemary shared valuable insights on strategic partnerships, regional collaboration, and the critical role Hampton Roads can play in advancing the aerospace sector. Her perspective highlighted how industry, government, and academia can work together to drive innovation and long-term growth in the region.

significant economic and technological opportunities that AAM presents for regions like Hampton Roads, given its strong defense, aerospace, and research presence. Denny’s insights reinforced Virginia’s commitment to fostering innovation while ensuring safety, sustainability, and accessibility in the next generation of aviation.

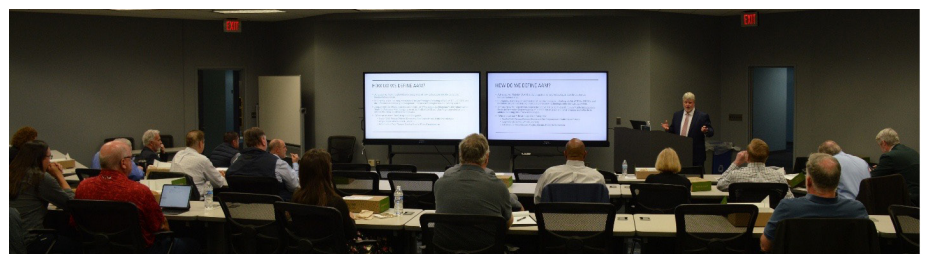


Scott Denny (left) receiving Certificate of Appreciation from VASBA President Dave Bowles


Upcoming events include a May 28 luncheon with a presentation by NASA Wallops Center Director Dave Pierce, and a July 29 discussion on the Newport News/Williamsburg Airport, including the proposed air commerce park, given by its executive director, Christopher Morello.

To learn how to register for upcoming VASBA events, please visit the VASBA News and Events web page at <https://www.vasba.aero/news--events.html>, and follow us on LinkedIn. ♦

On April 30, VASBA hosted Scott Denny, the Advanced Air Mobility (AAM) Program Manager for the Virginia Department of Aviation. Scott spoke on how the Commonwealth is supporting AAM research and development, and what the future holds for Virginia’s aerospace community in that field. Attendees gained valuable perspective on how Virginia is proactively addressing key components of AAM implementation, including infrastructure development, airspace integration, regulatory coordination, and community engagement. Denny also emphasized the importance of partnerships and collaboration in advancing AAM initiatives across the state. The discussion underscored the



VASBA Scott Denny presentation at VSGC



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