



Virginia Earth System Science Scholars (VESSS) Support

September 2024

By Dave Hinton

The LAA recently established dialog with the Virginia Space Grant Consortium (VSGC) to explore opportunities to support their STEM activities with the expertise of LAA members. On July 25, I had the pleasure of participating as a panel member for student group presentations of projects executed for the Virginia Earth System Science Scholars (VESSS) program.



Students participate in a live panel presentation for the VESSS program

The VSGC describes this program as “an interactive online STEM learning experience for Virginia high school juniors and seniors, which engages students in NASA’s satellite missions designed to improve understanding of our own planet’s complex systems through the power of remote sensing. Students selected to participate are immersed in NASA-related research and satellite mission design through interaction with NASA scientists, engineers, and technologists. Successful completion of the course is highlighted by a seven-day residential summer academy at NASA’s Langley Research Center in Hampton, VA.”

During their week at NASA, the students received tours of Langley, were exposed to various aspects of science mission planning by science professionals, and designed a space mission. They presented to a panel on July 25, 18 minutes to present and 8 minutes for panelist to ask questions. I participated on this panel and was tremendously impressed at the breadth of their mission planning and presentations, which included linkages to the Decadal Survey, decomposition of goals, objectives, and measurements, identification of instruments and launch opportu-

nities, partnership strategy, societal impacts, public awareness, budget, work breakdown structure (WBS), and risk management tools. The missions formulated included measurements of superplumes in the Earth’s lithosphere, changes in migratory bird routes, quantification of Atlantic Ocean current changes with climate, and atmospheric pollutant effects on tropical storms.

The interaction with the students was frankly fun. I was somewhat concerned about being a panelist for earth science mission project reviews, given that my career and expertise are in aeronautics—but project formulation and management is a skill that crosscuts aeronautics, science, and exploration. To our surprise, the hosts flipped the script after the student presentation and asked the panelists to sit up front and take questions from the students. They had insightful questions about the panelists’ career paths and various aspects of project management. Several students approached me after the event specifically to ask about aeronautics project management and my own career path.

This event drove home to me that we, the LAA members, have many professional skills and experiences of great interest to the next generation of scientists, engineers, and supporting careers as they search for their own path. And that the next generation is amazingly talented and eager to contribute, and only needs exposure to the right opportunities. The LAA will be making efforts to find opportunities like this and get the word out to members. I highly encourage participation and believe you will find it rewarding. ♦

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President's Report

By Olaf Storaasli, President



Group photo at the LAA annual picnic

The LAA held its annual picnic at LaRC on July 9th with 47 LAA members and guests in attendance. I greeted all, my first visit to Langley since being elected as your first remote President. Despite my [second career](#) at ORNL, we value our LAA colleagues and friends. Be sure to visit the [LAA website](#) for more photos from the picnic.



Olivia and Olaf hosting the Fun Facts game

Before and after a tasty meal, Kathy's daughter Olivia and I shared some Fun Facts about our clever LAA members. We met astronaut [Charlie Camarda](#), LAA's speaker for September.

At the August Board meeting, our officers reported 244 talented members and growing, a healthy treasury, and many and NASA-related and service activities, promising LAA's bright future. Our Nominating Committee, led by Susan McClain, will soon nominate candidates for the Class of 2028 Board of Directors and the officers for 2025. We welcome your ideas and talents to serve your LAA. ♦



Remember!

Sept 10: Culture & Safety Concerns at NASA
Charlie Camarda

Oct 10: Life After Langley Travel Adventures
Tony Pototzky - New Zealand
Ray Rhew - Africa

Nov 12: Professional journey & the commercial space revolution
John R. Olds

Dec 11: *New Date* Holiday Luncheon

Vice President's Report

By Kathy Ferrare, Vice President and Programs Chair

During our short two-month hiatus from our LAA monthly meetings, the LAA has stayed busy involved in volunteer and fun-filled activities. We've participated in the Virginia Aerospace Science and Technology Scholars (VASTS) program attending several of their closing ceremonies, Virginia Earth System Science Scholars (VESSS) review panel, LAA picnic, NASA Family Day, Dave Young's retirement social, and attending the Flying Proms Symphonic Air Show and Patriotic Celebration.

An exciting line-up of speakers and events are scheduled for the remainder of 2024, ranging from problems

NASA is facing and thoughts on how to correct them; Life After Langley members' travel adventures; the commercial space revolution; and culminating with our LAA Holiday Luncheon on December 11th (new date—mark your calendars)! If you are interested in helping plan the luncheon, please contact me at 757-880-8676 or kferrare@verizon.net.

The reminder list on page 2 provides a quick view of our upcoming activities, with more details for the remainder of the calendar year on our website at <https://larc alumni.org/21-events>. We hope you join us in person or virtually!

If someone or an activity has caught your attention that you feel other LAA members would be interested in, we welcome your suggestions as we start planning for 2025! Please share your thoughts with me or any board member. We are dedicated to engaging all LAA members in our planning process.

Thank you for everyone's active participation at our monthly meetings and feedback on our presenters! It has been wonderful to see so many people attend in person and virtually. The LAA Board appreciates your suggestions and participation during our meetings. ♦

Membership Chair Report

By Dave Hinton, Membership Chair

The LAA has had an active quarter in membership. In 2024 to date, 24 new members have joined, with 11 in the last three months. We currently have 243 members roughly equally split between yearly members and those that have paid for lifetime dues.

A few have indicated that they joined after outreach by another LAA member, so please continue the word-of-mouth invitations to your retired colleagues to consider the LAA! The Center is now providing a link in the retirement checkout checklist for LAA information, and roughly half of the new members are joining during the retirement process.

We are learning about changes at the Badge & Pass Office. Staffing has been reduced and workload at times is very high. They are asking now that we do **not** call to ask about our badge being ready for pickup and they also ask that for pickup of our 6-month activity badges we come in during less busy times, in the after-

noons Tuesday through Thursdays. In the past I have been notifying members when to go in to pick up a badge. I plan to meet with B&P soon, gain more clarity on the changes, and strengthen the notification process so you know when to pick up a badge.

The process and criteria for issuing and renewing 6-month activity badges was changed in January to align with agency policy. The Center does not issue "retiree badges" as may have been the practice some years ago. Activity badges are issued by NASA Langley Research Center to members of various on-Center organizations (e.g., LAA, Fitness Center) for their members who require routine physical center access for those functions. The LAA currently has about 94 members with activity badges, or about 40% of the membership. To date in 2024, 16 badges have not been renewed due to various factors; either the member voluntarily asked to not renew due to lack of use, or dues were not brought up to date,

or the member has ceased activity with LAA. While there is no effort to reduce the number of badges to a specific number, we are obligated to ensure that the ones we request are in accordance with NASA's policies.

We now have over a half-year of experience with the new process, and everyone who currently has an activity badge through the LAA has concurred with the badging policy. Going forward, on-Center LAA meeting attendance data for the past six months will be used as a factor in approving badge renewals, realizing of course that members who have just joined LAA have not had many attendance opportunities. The LAA meeting attendance rosters will be used, so please be sure to get your name on the attendance roster, legibly printed. Additional details and FAQs have been emailed to all active LAA members, so please ask me if you have not received that email, have questions about the process, or have specific issues with your badge. ♦

Langley Alumni Are an Untapped Resource

By Rich Antcliff

Hampton Roads is a special place where innovation, scientific expertise, and top-tier research institutions come together. By uniting these strengths, we can create a powerhouse of growth and success.

Hampton Roads is unique. We have leading research centers and a vibrant entrepreneurial community unlike any other Metropolitan Statistical Area in the country. This mix creates a perfect storm for national innovation in both science and business. Our scientific institutions are at the cutting edge of research, and our entrepreneurial groups are ready to support and grow new ideas.

NASA Langley alumni may be the missing link to turbocharge our entrepreneurial ecosystem. Your leadership, problem-solving abilities, and technical know-how are exactly what we need. When you team up with local entrepreneurs, the results can be groundbreaking, especially in areas like aerospace, logistics, maritime, and low Earth orbit (LEO) technology, all familiar topics.

The [REaKTOR Innovation Center](#) has been reenergized to help you get involved. They know how to build successful startups and have the connections to bring in the help you will need. Things you might need include: funding, a business plan, contracts and proposal writing help, a business-savvy partner, people to do the hands-on work, and university and small business contacts.

Your first step is to contact Tim Ryan (tim@reaktor757.org) and James Doe (james@reaktor757.org), experts in the region who know all the key players to make you successful. To think out loud with somebody, contact Rich Antcliff (richard.r.antcliff@gmail.com). After 40 years with NASA, he

is working with Tim and James to leverage the wealth of technologies hidden behind the NASA walls.

To make the most of what Hampton Roads has to offer, we need a strong, united entrepreneurial ecosystem. Here's how you can play:

Forge stronger partnerships—Do you have an idea for a startup or know about a technology that you think would make a great product? Contact REaKTOR.

Promote technology transfer—Do you know of a NASA technology just sitting on the shelf waiting for someone to make a company out of it? Contact REaKTOR.

Support new growth—Do you know of other folks who have been debating getting their feet wet in entrepreneurship? Contact REaKTOR.

Focus on key sectors—We can concentrate on areas where Hampton Roads excels, like defense, logistics, maritime, and low Earth orbit (LEO) technology. By focusing our efforts, we can create specialized hubs of innovation.

Now is the time for Hampton Roads to shine. By bringing together NASA retirees, entrepreneurs, research institutions, and support organizations, we can drive innovation and economic growth. This collaborative approach benefits not only our local economy but also strengthens our national scientific infrastructure.

Let's seize this opportunity to transform Hampton Roads into a hub of innovation and entrepreneurial excellence. Together, we can lead the way in technological advancements and economic prosperity, not just for the region but for the nation. ♦

Notable Technologies

By Charles Byvik

The 2023 Nobel Prize in Physics was awarded "For experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter." This prompted a look into the experimental details that enable the attosecond light pulses. At its heart is a titanium-doped sapphire laser. In the 1980's, LaRC was searching for a tunable solid state laser material for atmospheric remote sensing. Titanium-doped sapphire was a leading candidate and LaRC led fundamental research efforts on crystal growth, thermal and optical properties, and laser development. Its broadband fluorescence spectra enables tuning lasers across a wide spectrum. This same property is the enabler of the attosecond laser pulses used to explore fundamental atomic interactions that led to this 2023 Nobel Prize!

Another research effort at LaRC was the development of a coherent solid state laser for Doppler measurements of atmospheric turbulence. A grant program with Stanford U. successfully demonstrated this capability using a patented "ring" laser crystal called NPRO (Non-Planar Ring Oscillator). This stable coherent property enabled NPRO to be used as the master oscillator for the Laser Interferometer Gravitational Observatory (LIGO) systems that have detected gravity waves due to collisions of black holes that led to Nobel Prizes in 2017! The NPRO was also to be the basis for a laser-based clock demonstration; however, this program was terminated before being fully implemented.

LaRC played a central and pioneering role in the development of these two technologies that led to Nobel Prizes decades later. Credit to Dr. Frank Allario for pushing these two innovative technologies! Of course, he had some eager staff to help. ♦

Flying Proms—a Symphonic Airshow and Patriotic Celebration

By Linda Bangert and Kathy Ferrare

On the lovely evening of June 15th, AIAA and LAA members, with friends and family, attended the Flying Proms a Symphonic Airshow and Patriotic Celebration at the Military Aviation Museum in Virginia Beach.

This year was a celebration of the 80th Anniversary of the D-Day landings in Normandy. As part of that, a pipe and drum corps performed to commemorate Bill Millin, the Canadian bagpiper who played during the D-Day landings while under fire. In the program, it was noted that he later talked to captured German snipers who claimed they did not shoot at him, because they thought he had gone mad.



Front row: Olivia Ferrare, Kathy Ferrare, Linda Bangert, Marcia Domack
Back row: Jackson Ross, Rich Ferrare, Brent Weathered, Chris Domack



Enjoying the airshow!



Vintage aircraft on display after the airshow

A C-47, Supermarine Spitfire, and P-51 Mustang flew to the live music from “Band of Brothers,” “A Bridge Too Far,” and other similar tunes provided by the Virginia Wind Symphony. The Navy planes which flew were a FM-2 Wildcat, FG-1 Corsair, and TBM Avenger, paying tribute to The Battle of the Philippine Sea and “The Great Marianas Turkey Shoot,” and “The Mission Beyond Darkness.”

After the airshow, the planes landed and were on static display. At dark, the finale was a fireworks show set to more music from the Virginia Wind Symphony. We all enjoyed the show and had a great time! ♦



NASA and the Flying Proms



Spectacular fireworks after the airshow

Virginia AeroSpace Business Association (VASBA)

By Jack Schlank

VASBA held another of its lunch-time programs on May 29th, this time at the Hampton Embassy Suites. During our meal we heard presentations from both Mrs. Rosemary Baize, NASA Langley's director of the Strategic Partnership Office, and Mrs. Nancy Grden, President of the Hampton Roads Executive Roundtable.



Nancy Grden, HREER

Mrs. Baize gave a summary on LaRC's impact on the Commonwealth's economy, described the Strategic Partnership Office's mission, and discussed current trends in the aerospace markets.

Mrs. Grden's presentation included information on GO Virginia, where GO stands for Growth and Opportunity. It encourages collaboration among local governments, higher education, private industry and the workforce.

Our next luncheon will be on August 14th, also at the Hampton Embassy



Rosemary Baize, LaRC

Suites. Our speakers will be Mike Fremaux, LaRC's Chief Engineer for Intelligent Flight Systems, who will speak on the Center's new Flight Dynamics Research Facility; and Bradley Weidenhammer of VDOT, who will give us an update on the HRBT Expansion Project.



Our annual VASBA Gala will be held on October 3rd at the City Center Marriott. It is the annual fundraising event that allows us to provide our yearly STEM-related scholarships and sponsorships. Once again it will be held in conjunction with the AUVSI three-day symposium.

This year our keynote speaker will be Dr. Peter Brookes, presenting "A World of Uncertainty: Global Flash-

points & Hotspots." The international landscape is fraught with instability. Will China invade Taiwan? Will Russia use a nuclear weapon in Ukraine? Will Iran build the bomb? Is terrorism on the rise? What role will AI, drones, and satellites play in future warfare?

Dr. Brookes will give us the story behind the headlines, calling on his



Dr. Peter Brookes

decades of experience working in foreign policy and national security at the Pentagon, on Capitol Hill, at the State Department, the CIA, and in the Navy to speak to these challenges.

You do not have to be a member of VASBA to buy a ticket or sponsor a table. If you are interested, please email Jack Schlank, jschlank@sier-ralobo.com, for more information. We hope to see you all there this fall! ♦

LANGLEY ALUMNI ASSOCIATION

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On the Lighter Side

Q: Where do bad rainbows go?

A: To prism. It's a light sentence, but there's plenty of time to reflect.

Q: Why didn't the photon pack a suitcase?

A: Because he was traveling light.