

Volume 34.4
Winter 2024
Fourth Quarter

PSF NEWS

Planetary Studies Foundation

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Season's Greetings from the Planetary Studies Foundation

Wishing you and your family a happy
and healthy New Year...



... and peace on Earth to all.

Things We're Thankful For This Holiday Season

1. Our dedicated membership. For 35 years, people from around the world have believed in our mission.
2. Educators that come in all forms — teachers, parents, grandparents, caregivers, and science enthusiasts who share their passion with children. Sparking an early interest in young minds and fostering scientific literacy is the foundation of our mission.
3. The generosity of members each year when deciding which non-for-profit organizations and charities they'll consider during the giving season. Donations contribute to our operating expenses each year.
4. Our Board members and our staff. Thanks to your time, devotion and passion, critical decisions are made and executed.
5. Dedicated volunteers at the Doug Firebaugh Observatory — we thank you for your dedication.

PRESIDENT'S MESSAGE

The Winter Newsletter is traditionally a “look back” on all the major achievements our Planetary Studies Foundation has made this past year and an optimistic “look ahead” to the coming year. Certainly, the most dramatic and emotional event of the year had to be our individual observations of the April 8th Total Solar Eclipse. Blessed with great observation sites and generally excellent weather at most locations, it was a most memorable experience for all. The four minutes of total darkness and the fact that we were a solar sunspot maximum made the event even more exciting for us. Later in the year the Sun also gave us earthlings another series of spectacular treats in the most colorful display of the northern lights. The month of April saw the seasonal opening of the popular bi-monthly observing sessions at our Doug Firebaugh Astronomical Observatory in Freeport, IL. Jim Dole and his volunteer staff once again provided excellent pre-viewing programs. They later excited the people with breath-taking telescopic views of the Moon, planets, nebulae and distant galaxies. First time viewers never cease to be amazed by their site of Saturn’s rings. The final event of our observing season was held on November 8th at the Karl G. Henize Astronomical Observatory at Harper College in Palatine, IL. This event was organized by PSF’s Executive Secretary, Andrea Nolan, for the benefit of all our members and especially for those in the Chicago area. The event was also staffed by Jim Dole and his Doug Firebaugh Observatory volunteers. Perhaps the most surprising aspect of the event for the over 40 attendees was the almost perfect weather for an early November night. Who could ask for anything more!



Although not as visible as our viewing sessions, our meteorite research programs remained at a very active level throughout the year. The first half of the year saw our Associate Curator, Evelyn Larson, hard at work at the Yale Peabody Museum (YPM). Her job was to put the “final touches” on the transfer of the over 2,800 meteorites that represent the combined James M. DuPont and PSF Meteorite Collections. This involved her taking over 3,000 photos, the weighing of each specimen, and an informative description of each meteorite. Eventually all this information will be fully catalogued before being uploaded into YPM catalogue system. Thanks to Evelyn Larson for her dedication to the project and to the entire YPM administrative and museum staff for their foresight and confidence in our organization. The PSF’s meteorite collections will now be available for both the public and research users for centuries to come. But this is not the end of our association with the YPM. As the years go by, PSF will continue to add more meteorites to the ever-growing YPM Collection. Currently we are preparing the over 350 meteorites donated by our PSF Life Member, Dave Smith, for a late Spring transfer to join the YPM collections. We are also looking forward to having Grant Harkness, our newest Associate Curator, add his energy and expertise to our meteorite programs.

The outlook for 2025 seems to be quite positive for both our educational and meteorite research programs. Our financial position is strong, and our infrastructure is heading in the right direction. Given the current level of uncertainty in both the world and domestic situations we can only hope that outside influences do not have a negative effect on our organization. Over the past 35 years, thanks to our loyal members, friends and dedicated staff, PSF has survived many difficult times. Hopefully we will do so again through our ability to adapt to change and always find paths to achieve our goals.

Wishing all our members, families and friends a very Merry Christmas, Happy Holidays, and a Happy New Year.

Paul P. Szipiera

DONORS SPOTLIGHT

General / Operations Fund

Jeff, Judith & Philip Glenn*
Diane & Paul Sipiera***
Linda A. Virag*
Ralph Winrich*

* Recognizes a donation of \$50 to \$499

** Recognizes a donation of \$500 to \$999

*** Recognizes a donation of \$1,000 & up

Sponsoring Membership Upgrade

Bonnie Garrity
Gayle Gillig

Renewing Members

Individual Membership

Karen Sabatini
Ralph Winrich

Family Membership

Leo & Karen Baran
Ernst & Mary Jo Jolas
Jill & Scott McHugh

In Memorium

In remembrance of our dedicated members who have recently passed away.

William A. Anders
Cecilia Cooper
Michael Gillig
Anne Swan-Johnson
Martha Purchis
and

Condolences to Executive Board Member, Douglas L. Hicks, on the passing of his father
Cyril Hicks at the age of 103.

In the News: Our Donated Meteorite Collections to the Yale Peabody Museum

Over the last few years, you've heard a lot about the PSF's donation of the DuPont and PSF meteorite collections to Yale University's Yale Peabody Museum in New Haven, CT. It was a lot of work to bring this to life with the years-long work concluding just this year with the final photographing, weighing, and cataloging of the collections by PSF's Associate Curator, Evelyn Larson. We were excited to receive a hard copy of the Mineralogical Record from the museum with a feature detailing their recent renovations and additions to Yale's mineralogy and meteoritic collections. The below excerpts have been edited to specifically share the mention of our meteorite contribution, however, the full publication can be found and purchased at: www.mineralogicalrecord.com/product-category/digital-product/

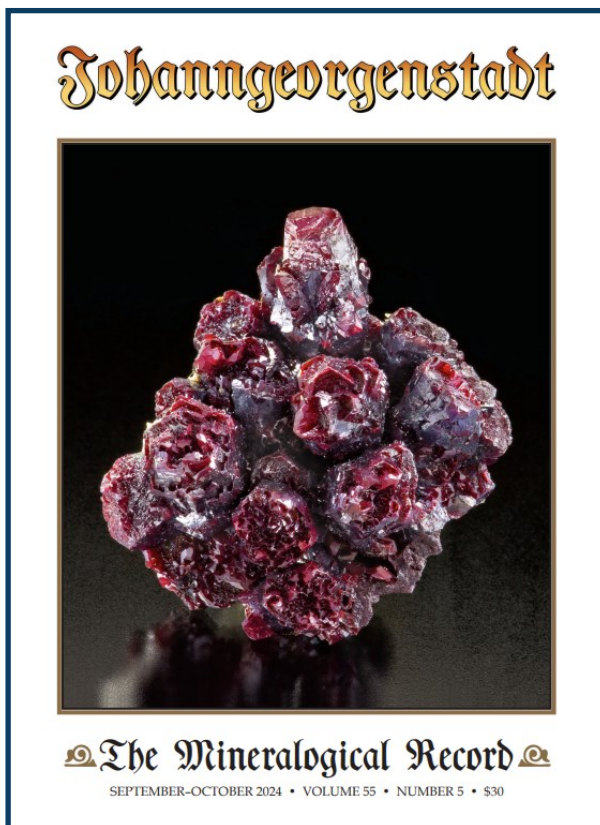
Excerpt from The Mineralogical Record, volume 55, September-October, 2024:

IN THE BEGINNING

The first Yale Peabody Museum building opened to the public ten years after George Peabody donated \$150,000 to the Yale Board of Trustees. It was located at the southwest corner of Elm and High Streets in downtown New Haven, and was planned as the northern wing of a much more ambitious building that was not fully realized.

The Yale Mineralogy Cabinet had its beginnings as a result of the assiduous work of Benjamin Silliman, Sr. When hired in 1802, he became Yale's ninth professor, and the nation's first science professor.

By the time of his death, two years



before George Peabody's gift to Yale, the Yale College Mineral Cabinet was the preeminent mineral collection in North America. Following the 1807 fall of the Weston meteorite — investigated,

analyzed, and written about by Silliman with great expediency — the first meteorite collection in North America, and hence North American meteoritics, also began at Yale.

[PSF MENTION]

In the last few years, the oldest meteorite collection in North America grew significantly thanks to two massive and transformative donations from the Planetary Studies Foundation, led by President and CEO Paul P. Sipiera. The Division's relationship with Paul Sipiera was spurred by Anthony J. Irving, who visited the museum in 2013, on the occasion of the inauguration of a temporary display featuring a rare meteorite

on loan from the collection of Stefan Ralew. The first Planetary Studies Foundation donation was followed a few years later by the gifting of the Foundation's own meteorite collection. One of the highlights in that collection is a 8.7x6.6-cm slice of a lunar highlands polymictic breccia. The second donation also included a marvelous gift of a thin slice of the Semchan pallasite from the personal collection of Dr. Sipiera. Thanks to these two significant Planetary Studies Foundation

donations, combined with the Peabody Museum's previous meteorite collection, the Yale Peabody Museum holds today between 3,000 and 3,500 meteorites from distinct meteorite localities. The total number of specimens is much larger, as the Yale Peabody Museum collection contains multiple specimens of some meteorites. Cataloging the entire meteorite collection is an ongoing project. ♦

With the passing of Apollo 8 astronaut and PSF member Bill Anders this past June, we thought it would be particularly special to revisit Apollo 8's Christmas Eve broadcast in 1968. As Apollo 8 command module pilot and PSF member, Jim Lovell, recalled during the 40th anniversary celebrations in 2008, "The first ten verses of Genesis is the foundation of many of the world's religions, not just the Christian religion. There are more people in other religions than the Christian religion around the world, and so [we thought] this would be appropriate to that and so that's how it came to pass."

Bill Anders

We are now approaching lunar sunrise, and for all the people back on Earth, the crew of Apollo 8 has a message that we would like to send to you.

In the beginning God created the heaven and the earth.

And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.

And God said, Let there be light: and there was light.

And God saw the light, that it was good: and God divided the light from the darkness.

Jim Lovell

And God called the light Day, and the darkness he called Night. And the evening and the morning were the first day.

And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters.

And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament: and it was so.

And God called the firmament Heaven. And the evening and the morning were the second day.

Frank Borman

And God said, Let the waters under the heaven be gathered together unto one place, and let the dry land appear: and it was so.

And God called the dry land Earth; and the gathering together of the waters called he Seas: and God saw that it was good.

And from the crew of Apollo 8, we close with good night, good luck, a Merry Christmas – and God bless all of you, all of you on the good Earth.

ARTIFICIAL INTELLIGENCE EXCESSIVE or NECESSARY?



By: Avery Engle

Avery started at Kansas State University this past fall, studying Animal Science on the Pre-Veterinary Path with an emphasis in equine. Over the summer, she was a lifeguard and helps the PSF on various projects. She has always had a love for nature and astronomy.

Did you know that 77% of devices have some sort of artificial intelligence in them? The same technology that was used in the NASA rovers Spirit and Opportunity while exploring Mars in 2004, is now in the palm of our hands. As a college student, my viewpoint on the necessities of artificial intelligence may be different than most, or some may find it surprising. There's no doubt that A.I. is needed in science, but is it crucial in academics? An appropriate balance needs to be found, and by diving into this topic, maybe we can find one.

When my deliberation group received the subject that we were to be talking about for our final speech in Communications class, we were all a little hesitant. The subject, *How Can the Government Impose Stringent Rules on the Creation and Application of Artificial Intelligence?*, was intimidating to talk about. After all, A.I. is a college student's best friend; It can answer homework problems, type papers, create prompts, and can all around make schooling a much easier process.

Personally, I try to steer away from A.I., as I believe that if I'm paying money to learn what I need for my desired profession, then I better learn it to the best of my ability. However, the abuse of A.I. is

very real in college, as students have access to highly developed A.I., like GPT-4 which can do a vast array of activities, including passing the bar exam. What my deliberation group agreed on, was that A.I. will always be prevalent, and since it's an actual tool it can't/shouldn't be taken down. When it comes to students abusing A.I. for tests and uncreative work, we decided that the students should face some sort of penalty, whether it's a mark on their academic record or an actual fine. This way, students won't feel as pulled towards taking the easy way out with A.I., as it will come with repercussions. There needs to be a limit on the levels of Artificial Intelligence that is available to students/society, because as of now, if I wanted to create a video of Taylor Swift landing on the moon, I could, and half of the world might believe it.

Now, as for the use of A.I. and related technologies in science, they couldn't be more crucial, especially in terms of space exploration. For example, NASA is using A.I. to help plan future missions to Mars. A.I. is analyzing data from previous Mars missions, such as images and sensor readings, and this data is being used to predict and develop new models of the Martian environment. The European Space Agency is currently using artificial intelligence



to control a robot called ExoMars that is exploring Mars surface. This robot is equipped with an A.I. controlled camera that identifies objects and directs the robot to explore that object.

As stated by Techopedia.com, the AI market is expected to grow by 36.6% each year from 2024 to 2030, showing strong future growth. Balance is key for everything, and we can see that balance is needed to ensure the growth of A.I. has positive impacts, and not negative ones. This all starts with the amount of access civilians have to these technologies, and determining if that amount is appropriate or not.

Sources:

1. *AI and Space Exploration* | Department of Rocket Science
2. *The History of AI: A Timeline of Artificial Intelligence* | Coursera

The Little Non-profit that Could...

By: Andrea M. Nolan

"I think I can, I think I can."

If you're familiar with the American folktale [The Little Engine That Could](#), then you know the story. It's a story based on the value of optimism and hard work, and it's a children's book classic. As a parent to two young boys, I've not only read the book, but the story is one that resonates both personally and professionally.

The PSF reminds me a lot of that little engine. With each chug along the track, the persistent, smaller engine accomplishes what the larger ones could not. This year was categorized as "transitional" by President, Paul Sipiera, and the PSF Board because as the organization ages, changes need to be made and priorities for the future need to be defined.

And yet, through it all, we keep growing and getting better! With Paul at the helm, Diane Sipiera and the Board advising on various decisions throughout the year, and a group of people around us that believe so strongly in our mission, we accomplished so much.

What really stands out to me are the people that continue to give the PSF fuel and life. We have operated for 35 years, and when I look at what we've accomplished in a seemingly low-effort year, I'm in awe!

Our community partners like the volunteers at the Firebaugh Observatory show up each and every season to bring the nighttime skies to the Freeport, IL area.

Sharing the skies with children, families, and science enthusiasts has always been at the core of the PSF. We were fortunate this November, that with the help of Dr. Kelly Page at Harper College, we were able to hold a Members Night at the Karl G. Henize Observatory. It was a familiar setting for Chicagoland members to have an opportunity to get together, and it was personally special for my husband, Ryan, and I to introduce our son, James, to the observatory for the first time. I was his age when I first visited Harper's observatory and undoubtedly, that experience changed the way I thought about science and the "stuff above."

The PSF has that affect on young people. This year alone, we continued our scholarship support of the Harper College "Realizing Dreams" Educational Foundation. This financial support allowed a young woman, Melanie E. Lobos Torres, to continue her education in pursuit of a career in civil engineering.

Funded partially by a PSF Fellowship Grant, Associate Curator, Evelyn Larson got to spend the first half of the year cataloging and photographing 2,800+ specimens from our James M. DuPont and PSF meteorite collections that were donated to the Yale Peabody Museum in New Haven, CT. Once she concluded that work, she was on her way to MIT to start her doctorate program where she will work on fundamental questions in planetary science and plans to keep our organization up-to-speed as she continues her incredible educational journey.

If you're regular reader, you'll also notice a thoughtful, well-written column by Kansas State University student, Avery Engle. She explores topics that are modern and timely. Plus, she brings a curious and fresh perspective to her content that if you ever catch yourself saying, "what's wrong with kids these days" — you'll be reassured absolutely nothing! She's bright, optimistic, and positioned for a successful future.

Even at the ripe old age of 35 years, when many businesses and not-profits would be losing steam, this little engine — the Planetary Studies Foundation — is not! There is a lot of life and passion in the current membership and we see it each quarter through the incredible things our members are doing.

There are a lot of ideas being discussed for 2025 & beyond, and ways the PSF can continue to influence meteoritics, children's programming, member events, and more. We know the holiday season is a busy time of year, but please consider the PSF for a donation — no matter the amount — to support us in all that we do. If now is too busy, consider making a donation in the New Year. We'd be happy to remind you! ☺

Please visit planets.org/donate to learn more about donating to our organization and, as always, feel free to reach out if you're interested in other ways to get involved.

MEMBERSHIP FORM

Regular Membership ___ \$ 20.00 1 year **or** ___ \$ 35.00 for 2 years
Family Membership ___ \$ 35.00 1 year **or** ___ \$ 60.00 for 2 years
Sponsoring Membership ___ \$ 50.00 1 year **or** ___ \$ 90.00 for 2 years
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Student Membership ___ \$ 10.00 1 year
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For more information about our mission, articles and upcoming events, visit:

www.planets.org