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PSF NEWS

Planetary Studies Foundation

IN THIS ISSUE

PRESIDENT'S MESSAGE

PAGE 2

DONORS & MEMBERS CORNER

PAGE 3

MEMBER SPOTLIGHT:

GERI DOD

PAGE 4-5

THE SPACE PROGRAM: THE GIFT THAT KEEPS ON GIVING

AVERY ENGLE

PAGE 6

WINTER CELESTIAL CALENDAR

PAGE 7

Season's Greetings from the Planetary Studies Foundation



Wishing you and your family a happy
and healthy holiday...

... and peace on Earth to all.

Things We're Thankful For This Holiday Season

1. Our dedicated membership. For over 30 years, people from around the world have believed in our mission.
2. Educators that come in all forms — 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.

PRESIDENT'S MESSAGE

As the eventful year 2022 quickly comes to an end there is much to be thankful for and many interesting things to look forward to in the year to come. For the most part, 2022 has been a positive and relatively stable year for your Planetary Studies Foundation (PSF). I am pleased to report that the PSF is financially sound and our dedicated reserve funds continue to grow for future use to support our meteorite research and educational programs. Our main area of success is still with our meteorite classification program. After two years of stressful work, we finally classified all 129 stony meteorites for a private collector. These type specimens were added to the ever-growing PSF research collection that will eventually join the James M. DuPont Meteorite Collection at the Yale Peabody Museum. It was in 2015 when PSF agreed to donate our meteorites, but unforeseen circumstances kept pushing the delivery date further back. Plans are now being finalized for the eventual transfer this May of the nearly 2,000 remaining meteorites. It seems like working with various museums is always challenging and the same can be said for our partnership with the Putnam Museum in Davenport, IA. In early 2019 PSF offered to donate representative meteorites for the purpose of creating a permanent educational meteorite exhibit. This display was also intended to honor the late PSF Executive Board Member, Christina Hollis, a good friend and collector of meteorites. Once again, many unforeseen circumstances pushed the exhibit's completion date further and further back. Seems like things are finally coming together with the completion of the display case. We now anticipate a spring member's and public dedication event. Looking to the skies, Jim Dole reported on another successful season of observing sessions at our Doug Firebaugh Astronomical Observatory in Freeport, IL. Seems like 2023 will be a good year!



I am a person who likes to remember anniversary dates and the significance they hold for me. One date that comes to mind is December 7, 1972. I was a first-year graduate student majoring in earth science at Northeastern Illinois University. Since childhood, I was fascinated by astronomy and later in life by NASA's Apollo Moon Program. I was one of the millions who watched television on Christmas Eve 1968 as Apollo 8 astronauts Anders, Borman and Lovell were in orbit around Moon. Then there was the excitement on July 20th 1969, when Armstrong and Aldrin stepped foot on the Moon. These events and the following lunar landings galvanized my intent to become a planetary geologist. So, it was on December 7 1972 that a geologist, Harrison H. Schmitt, was given the chance to explore and collect samples on the surface of the Moon. Apollo 17 was perhaps the most scientifically successful of the six lunar landings, but sadly it would be the last. Seeing Jack Schmitt bounding across the lunar surface and collecting rocks convinced me that could be me one day. He was now my hero and inspiration to become a planetary geologist. In 1975 I received my M.S. degree in earth sciences and began a career balanced between teaching and meteorite research. Then in 1989 the Planetary Studies Foundation was born with the mission to support at every level astronomy and earth science education. As PSF evolved over the years there would be many opportunities to meet and get to know personally almost all of the Apollo astronauts. Never would I have ever imagined I would have the opportunity to stand at the actual South Pole with Apollo astronaut Jim Lovell and Skylab astronaut Owen Garriott. It was the success of PSF that made all this possible and that success can be attributed to all its past and present Executive Board members, officers, researchers, educators, financial supporters and the general membership. One person who has consistently been the motivating force behind our organization is my wife, Diane M. Sipiера. From me personally and from the entire PSF membership we sincerely thank you for all your years of dedicated service and for your always positive outlook on life.

Season's Greetings and a Happy New Year from the ever-growing Sipiера clan: Paul, Diane & Caroline; Andrea, Ryan, James & Roc Nolan; and Paula, Cole, Olivia, & Miles Feiner.

Paul P. Sipiера

DONORS SPOTLIGHT

Fourth Quarter 2022 Donations (received by November 20th)

Douglas Firebaugh Astronomical Observatory

PEO Chapter IY
Freeport, Illinois
John Walt*

Meteorite Research

Anonymous***

General/Operations Fund

Diane & Paul Szipiera**
John & Jane Yoder*

* Recognizes a donation of \$100 to \$499

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

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

MEMBERS CORNER

RENEWING MEMBERS

Family Membership

Dan & Pam Tindell
John & Jane Yoder

Individual Membership

Dr. Carleton B. Moore
Karen Sabatini

NEW MEMBER

Individual Membership

Sara McGonagie

THANKS FOR VISITING US IN GALENA, IL!



Geri Dod (middle), longtime friend of Paul (left) and Diane Szipiera (right) and widow of former PSF Board Member, Bruce Dod, came for a visit during her move from St. Mary's, GA to be closer to her sons in Normal, IL



A beautiful autumn day spent with WLIP 1050 radio celebrities, Frank (left) and Kim Carmichael (second to right)

MEMBER SPOTLIGHT

Geri Dod

PSF: Where did you grow up?

I grew up in a Polish neighborhood of Hammond, Indiana. We lived 1 block off of the Illinois/Indiana border and 1 mile south of Lake Michigan. You could tell which way the wind was blowing by taking a good sniff of the aromas coming from the steel mills and oil refineries.

PSF: How did you become involved with the PSF?

Diane Sipiera! In the early 80's, we didn't even know each other when I overheard her telling someone down the hall that she needed a companion to accompany her on a trip to Colorado. I volunteered and two strangers got acquainted on the drive west. Since then, Diane had me doing all sorts of behind-the-scenes activities for PSF. Best of all, she introduced me to mountain climbing and Bruce Douglas Dod (1941-2021). It's been magic.

PSF: Where did you go to college?

Nazareth College was a small Catholic liberal arts-centered school run by the Sisters of St. Joseph in Kalamazoo, Michigan. From the nuns, I learned the basics and how to praise God by serving others who need help. From the world, I learned there are a multitude of ways by which I could accomplish this goal. Traveling and studying around the

world opens your mind and soul.

PSF: What is your profession?

Teaching— I still teach a course in blending quilting styles to senior citizens. It's important to instill a love of learning! These octogenarians are enjoying getting together to learn new things about old crafts. They keep me going.

PSF: What inspired you into and throughout your career?

1) I had the good fortune of having excellent teachers who were willing to find some teaching styles to accommodate my learning disabilities. They taught me to work hard and try out various methods of learning. I wanted to do the same for all the students I would have in the future.

2) Finding the key to stimulate learning came from using curriculum ideas initiated by students. I have a 4-inch-thick binder from a Teachers Space Camp in Colorado. Most days there was no time left over for extras. The book was left out for them to check it over. When they found something they liked, I asked them to make some time for us by behaving beautifully and doing their work on time and well. By the end of the quarter, they were making almost an hour of time a day available for SPACE.



Geri Dod

At the end of the year, we had constructed a Shuttle on the stage for all to see. The students, complete with hats, shirts, and badges, became astronauts, taking visitors out into space and showing their guests all about the workings of the vehicle.

The students then transformed themselves into "COOL NEWS" reporters (complete with hats, shirts, and badges, of course). These reporters took the information I sent to them to all the classrooms in our district. The reporters then sent questions from these distant classrooms to me. These questions were given to the expert panel for discussion and answers. "COOL NEWS" stumped them on one question— what do you call the sound a penguin makes? There were lots of ideas, but no agreement from the panel.

3) I was on the Marco Polo cruise ship when it was circumnavigating the Antarctic continent. Two

hundred people were lucky to join a panel of Antarctic experts led by Sir Edmond Hillary and Sir Vivian Fuchs. They were the first men to trudge across the continent. My school district provided me and several others with computers to use in long-distance remote education.

PSF: What are some of your hobbies?

I enjoy many things—mountain climbing and hiking (here in Normal, IL I can climb up Mt. Mercy to achieve an altitude of 72 inches), sewing, reading, crafting and listening to music.

PSF: Usually, we ask our Member Spotlight about their favorite place they've traveled, but we understand you've traveled all over the world and have many "favorites" — care to share?

Favorite Place

1) Antarctica stands out as the most peaceful place. There was absolute quiet and stunning beauty—mountains, snow, glaciers, icebergs, an ice park, and the list goes on.

2) Having Ed Hillary's help at our McMurdo base, New Zealand's Scott Base and NS Port Authority building in Littleton, NZ really helped us to make the connection with Homer Township Schools in Illinois. He was a great companion in a time of need!

3) I climbed Mt. Elbrus with a combined Russian/American team right after Russia opened to the West. It was a terrific chance to exchange ideas about the two



Geri recounts the kindness and compassion her and her husband experienced when Bruce became ill in Petra, Jordan.

ways of life. Growing up, we were taught the Russians were the enemy. Of course, the Russians were indoctrinated with the same warnings about the Americans. The combined team all agreed on the fact that we were just people who really enjoyed working together for a common goal. Now, why can't our governments do the same?

Favorite Animals

The elephants at Thailand's Refuge in Chiang Rai are a good example for us humans to follow. They love one another, work for a living, keep bettering their skills without complaint, are thankful for the food they are given, nurture and protect their young, aid those who are sick or in trouble, and mourn each other's passing.

Favorite People

When my husband became very ill in Petra, Jordan (pictures to the left), we experienced a people who lived their religion through their actions. No one would take any compensation from us because we were guests and we had a misfortune in their country.

PSF: Wow, you certainly live an interesting life! Are there any other "fun facts" you'd like to share with fellow members?

1) As I mentioned, I love mountain climbing. The highest mountain I've climbed was Mt. Elbrus in the Caucasus mountains of Russia. The elevation is 18,510 feet.

2) Both Bruce and I were living historians at Fort Clinch on Amelia Island, Florida for ten years. Bruce portrayed the medical steward and I ran the sutlery (general store) for the Civil War reenactments. We were both members of the Fort Clinch State Park Board for eight years.

3) My late husband, Bruce, was fellow PSF Board Member and professor of astrophysics at Mercer University. He also taught astronauts about collecting and preparing space rocks.

4) We were both volunteers for the Southeast Georgia Health System – Camden County Hospital in St. Mary's, Georgia. We were both also members of the Board there. ♦

THE SPACE PROGRAM

The Gift That Keeps On Giving



By: Avery Engle

Avery is a junior at River Ridge High School in Hanover, IL. Over the summer, she worked part-time for the PSF and has a love for nature and astronomy.

Have you ever owned a memory foam mattress? How about a pair of scratch-resistant sunglasses? Has the need for a cordless vacuum ever occurred? Or the need for a GPS system? Chances are, you've probably used one of these items at least once, and some may play an important role in your everyday life. The question is, who do we have to thank for these wonderful inventions? The answer is the men and women researchers, scientists, and astronauts who work in the space program!

Of the 2,000 spinoff technologies that the public has gained from the Space Program, the most used is the Global Positioning System (GPS). During the time of the Cold War and the Inter-Continental Ballistic Missiles threat, the United States was sending up more satellites. As more satellites entered into orbit, it was crucial to have systems to track and guide them. Those systems that played a large role in the 60's and 70's evolved into the modern day GPS system.

Designed by NASA funded researchers, memory foam was originally used to cushion pilots during flight. Temper (memory foam) is now used in most mattresses! During the Apollo program, Black and Decker was responsible for developing a motor to be used in a portable drill that

extracted core samples from the moon. The resulting technology from the portable drill motor is now your portable vacuum.

In the 1980's, NASA's Ames Research Center in Silicon Valley was on the hunt for finding ways to protect astronaut helmet visors from scratches, while filtering out UV rays and enhancing colors. Sunglasses, ski masks, and welding masks are now much safer and practical thanks to the initial research from the Ames center 40 years ago.

Not only has the space program pioneered countless technologies that we use today, but their research has helped change our world in ways that aren't materialistic as well. NASA used their knowledge of purifying water in space and applied it to issues in society. For example, NASA has collaborated with aid corporations to bring purified water to communities who don't have steady access to it. Another way that the

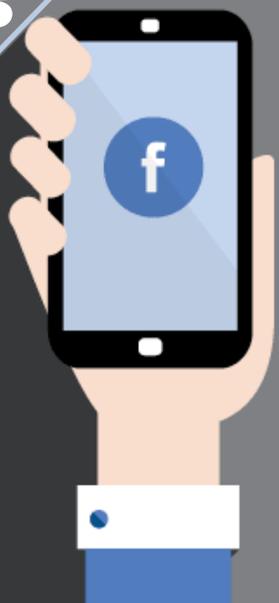
space program has benefited the world is through their discovery that keeping a healthy bone density can be accomplished through diet and exercise. In the early days of the space station, astronauts were losing about one-and-a-half percent of their total bone mass density per month. Scientists discovered that high intensity resistive exercise, dietary supplement for vitamin D, and specific calorie intake can remedy loss of bone mass in space. This knowledge is now used globally for older adults and vulnerable populations in keeping a healthy bone mass.

Calling the space program "the gift that keeps on giving" would be an accurate way to describe it. Not only has it brought people to the moon and achieved amazing exploration in space, but it has given the rest of the population inventions beyond our wildest dreams. Thank you, Space Program!

What do these items have in common?



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WINTER CELESTIAL CALENDAR

December 13, 14 — Geminids Meteor Shower

This shower is considered by many as the “king of showers” producing up to 120 multi-colored meteors per hour at its peak. It is produced by debris left behind by an asteroid known as 3200 Phaethon. The shower runs from Dec. 7-17, but will peak on the night of the 13th. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Gemini, but can appear anywhere in the sky.

December 23 — December Solstice

The South Pole of the earth will be tilted toward the Sun, which will have reached its southernmost position in the sky and will be directly over the Tropic of Capricorn at 23.44 degrees south latitude. This is the first day of winter in the Northern Hemisphere and the first day of summer in the Southern Hemisphere.

December 21 — Mercury at Greatest Eastern Elongation

The planet Mercury reaches greatest eastern elongation of 20.1 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the evening sky. Look for the planet low in the western sky just after sunset.

December 23 — New Moon

The moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This is the best time to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

January 3, 4 — Quadrantids Meteor Shower

The Quadrantids is an above average shower with up to 40 meteors per hour at its peak. The shower runs annually from January 1-5 and will peak on the night of the 3rd and morning of the 4th.

January 6 — Full Moon

This moon was known by early Native American tribes as the Wolf Moon because this was the time of year when hungry wolf packs howled outside their camps.

January 21 — New Moon

The moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This is the best time to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

January 30 — Mercury at Greatest Western Elongation

The planet Mercury reaches greatest western elongation of 25 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the evening sky. Look for the planet low in the eastern sky just after sunset.

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