

Volume 30.3
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Third Quarter

PSF NEWS

Planetary Studies Foundation

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Thank You!

FOR VOTING

Congratulations to James Hagen, Ryan Nolan and Paul Sipiera for being elected as your PSF Board of Directors, and a special thanks to all who voted. The PSF by-laws give members the opportunity to voice their opinions and select individuals to guide PSF into the future.

As an organization of 250 unique, individual members from across the globe, our by-laws state that we need at least 10% of our members to vote in the annual election. We are fortunate that we have members who not only believe in the organization, but want to volunteer their time, money and talents. We would like to give a special thanks who cast their ballots this year.

Joe Auer
Leo Baran
Karen Baran
Mary Becker
Cecilia Cooper
Carol Dehnbostel
Daniel Dod
Jim Dole
Charlie Duke
Jess Farlow
Kathie Farlow
Doug Firebaugh
Larry Fulfs
Bonnie Garrity
Jeff Glenn
Judith Glenn
Jim Hagen
Nancy Heggem
Doug Hicks
Richard Hoover
Ernst Jolas
Connie Kahl
Candace Kohl
Eugenia Krzyanski
Janet Landato
Evelyn Larson
Liz Larson
Richard Leary
James Lovell

Alma Mariano
Jerry Marty
Carleton Moore
Janet Moote
Andrea M. Nolan
Ryan Nolan
Mike Otte
Marsha Prieboy
Martha Purchis
Marilyn Quas
Blaine Reed
Robert Renguso
Joan Reylek
Larry Reylek
Jennifer Schwartz
Diane Sipiera
Dave Smith
Paul Solarz
Anne Swan-Johnson
Mary Beth Stark
Pat Tierney
Dan Tindell
Linda Virag
Monica Von Glahn
Carolyn Walmann
Herbert Windolf
Jim Wotal

PRESIDENT'S MESSAGE

As we reach the end of the third quarter of a most challenging year your Planetary Studies Foundation has continued to make progress in several different areas. The COVID-19 restrictions placed on museums and large public gatherings certainly had an effect on our planned programs. Events at our *Doug Firebaugh Astronomical Observatory* in Freeport, IL had to be cancelled and we had to close the door to visitors at our *1876 Banwarth House & Museum* in Elizabeth, IL. The pandemic restrictions on public gatherings also severely affected tourism all across the Tri-State region. There is no doubt in our minds that this was the correct approach to combat this common medical enemy and we all have to join together and do what's necessary to defeat it. Looking forward to the time when our lives will come back to what we hope will be a more "normal life" PSF decided to concentrate our efforts in three major areas.

First, proceed with the planned exterior painting and repairs on our *1876 Banwarth House & Museum*. This was completed in late July thanks to the dedicated efforts of our facility manager, Connie Kahl, and her husband, Jim. **Secondly**, we were able to devote a considerable amount of time to inventory and organize the over 1,500 meteorites that will eventually be transferred to the *Yale Peabody Museum* in New Haven, CT. This was made possible through the assistance from Evelyn Larson, our Yale undergraduate student intern who also serves as Assistant Curator of meteorites. Along with our efforts in organizing our extensive meteorite collection we were also able to classify 40 new meteorites. This was made possible through the efforts of our Senior Research Scientist, Dr. Tony Irving. Through Tony's efforts our collection numbers continue to grow and we maintain our international status as an official meteorite repository for scientific research. **Thirdly**, our educational efforts focused on the developing partnership with the *Putnam Museum* in Davenport, IA. Current plans are to provide the *Putnam Museum* with an exceptional display of meteorites and other related materials. In addition, we will be assisting in the development of displays related to Antarctic and Space exploration. This is a wonderful opportunity for both our organizations to promote earth and space science education in a very effective way. Our relationship with Grant Harkness and his *Wilton Observatory Project* has continued to grow and evolve into a spectacular international effort to promote astronomical and meteorite-based educational programs. All these accomplishments and we still have the fourth quarter ahead of us. Not too bad for dealing with a most difficult time in our lives!

The Annual Members Meeting was held this year on September 12th in a very different way. Given all the pandemic travel and group gathering restrictions it was decided that we hold an electronic ZOOM meeting. Through the efforts of our administrative staff we were able to encourage members to vote early through either paper or electronic means. This was extremely successful resulting in a record number of voters. At 1 p.m. the meeting was called to order with a welcome by Executive Secretary, Andrea Nolan. Next on the agenda was certification of the ballots by the Executive Secretary and her announcement of the election of Executive Board members Dr. James C. Hagen, Mr. Ryan P. Nolan and Dr. Paul P. Sipiera for the 2021-2023 term. As the meeting progressed the Executive Board approved the 2021 operations budget. In conclusion a PowerPoint presentation of the financial status and 2019-20 achievements of the organization was reviewed and discussed. It can be viewed on the PSF website www.planets.org. As noted in the Treasurer's Report, I want to personally thank those members who donated a portion of their stimulus check to PSF to help us financially through this difficult time. After the close of the members portion of the meeting the Executive Board members elected the following officers for the 2020-2021 terms: Paul P. Sipiera, President and CEO, Caroline A. Sipiera, Vice President, Andrea M. Nolan, Executive Secretary and Ryan P. Nolan as Treasurer.

For the remaining quarter of 2020 I hope that things get much better for all of us both here in the USA and throughout the world. As for PSF we will continue to move along with our stated mission and do the best we can with our limited resources.



Paul P. Sipiera

DONORS SPOTLIGHT

General Operations Fund

Amazon Smile Program
Carol Dehnbostel
Annea Swan-Johnson
Richard & Ellie Leary
Marilyn Quas
Paul & Diane Szipiera
Michael Zolensky

1876 Banwarth House & Museum

Connie Kahl
(Network for Good Program)

MEMBERS CORNER

NEW MEMBERS

Sponsoring Membership

Larry & Marilyn Fulfs

RENEWING MEMBERS

Family Membership

Jeff, Judith, & Phillip Glenn
Ernst & Mary Jo Jolas
Craig & Elizabeth Larson
Jill & Sean McHugh
Brett & Mary Beth Stark
Dan & Pam Tindell

Individual Membership

Jan Buedel
Jerome Clair
Candace Kohl
Janet Landato
Deborah Pausz
Marsha Prieboy

PSF 2021 BUDGET

1876 BANWARTH HOUSE & MUSEUM

Property Tax =	3,300
Insurance (off-site locations included) =	3,200
Utilities =	3,400
Security =	800
Maintenance & Misc. =	2,300
	Sub-total = \$13,000

GENERAL OPERATING EXPENSES FOR 2021

General Office:	
Internet Services =	1,000
Office Supplies =	500
Newsletter & Postage =	2,500
Staff & Programs:	
Administration =	5,000
Office Support =	5,000
Other:	
Doug Firebaugh Astronomical Observatory =	1,000
Student Meteorite Research Internship =	8,000
Potential Putnam Museum Exhibit Expenses =	2,000
Marketing:	
Meteoritical Society student Travel Grant =	2,000
	Sub-total = \$27,000

METEORITE RESEARCH

SELF-FUNDING PROGRAM SUBJECT TO ANALYTICAL FEES & SALES

Analytical Services: Brown University & Washington University in St. Louis =	1,750
Sample Preparations (Probe Sections) =	1,250
Research Personnel Compensation =	5,000
	Sub-total = \$8,000

PSF 2021 Budget

Grand Total = \$40,000

SPACE NEWS: COMING UP SOON

- The OSIRIS-REx mission is expected to make a sample collection attempt on the asteroid Bennu on October 20, 2020. The spacecraft will fire a puff of pressurized nitrogen to disturb the surface, collect the sample, and then leave the surface of Bennu. OSIRIS-REx will return the sample to Earth on September 24, 2023.
- The first of many operational flights with the Crew Dragon spacecraft and Falcon 9 rocket to the International Space Station is scheduled for no earlier than October 23, 2020, pending data review and certification from NASA following the Demo-2 mission earlier this year. The mission will carry Crew Dragon commander Michael Hopkins, pilot Victor Glover, mission specialist Shannon Walker, and mission specialist Soichi Noguchi (JAXA).
- Asteroid 2018VP1 is expected to make a close pass by Earth on November 2, 2020 at just around 5,000 kilometers. But don't worry—there's only a 1 in 240 chance it will collide with Earth, and it's only 6.5 feet wide (small enough to burn up in the atmosphere).

MEMBER SPOTLIGHT: Carleton Moore

Carleton Moore is Regents' Professor, Professor Emeritus of Chemistry and Biochemistry and Founding Director of the Center for Meteorite Studies at Arizona State University. Moore also worked with several of the Apollo missions on moon dust and moon rock, which helped create ASU's reputation for significant work in planetary geology and astrophysics. He wrote several books, including Cosmic Debris (1969), Principles of Geochemistry (1982), and Grundzüge der Geochemie (1985) and edited Researches on Meteorites (1961).

Can you tell us about your educational background and what originally interested you in the sciences?

In my elementary school in Hempstead, N.Y., we had the same science teacher in 6th through 8th grade. Mrs. Hulse was particularly good at physical science, and I was attracted to mineralogy and geology. This started it!

I then took Earth Science in high school because of this interest. I went to college at the SUNY College of Ceramics at Alfred University. Only a single course in geology, but heavy in chemistry and physics. Professor Louis Weinland there talked me into applying to Caltech in chemistry. Linus Pauling the chair required students to take a minor in another science so of course I picked geology. There I met Harrison Brown, who had just discovered the different groups of iron meteorites and set me to doing analyses of chondrites to see if they were grouped too.

You helped found the Center for Meteorite Studies at Arizona State University. How did you become involved with this project?

When Arizona State acquired the Nininger meteorite collection, it went into the Chemistry Department. There were few chemists who did meteorite studies then, so Brown recommended me. Herbert Fales, a supporter of Nininger, came to talk me into coming to ASU from Wesleyan University in Connecticut,

where I was then teaching. At ASU I asked for a joint appointment in geology. Fales became a fantastic supporter of the center.

How did you and PSF President, Paul Sipierya, meet?

At ASU we had many visitors come to work with the meteorites. Paul was one of these and we published on mutual meteorite studies.

Over the course of your career, who did you find to be the most interesting or exciting person to work with?

The most important person who I was associated with was Charles Lewis, who came to help curate the collection. He was a good chemist and mineralogist. He did a superb job of curating the collection.

Does your family share your interest in meteorites?

My family members including a daughter, son and grandchildren do know about meteorites but unfortunately haven't found any themselves, except at Barringer crater where I was a scientific consultant and allowed to hunt.

What is your favorite meteorite, and why?



After I retired I could then acquire meteorites of my own. The one I like the best (mainly because of its name) is Bumble Bee, found by a gold prospector. It even looks like a fat little bee.

Besides meteorite research, what are your other hobbies?

I also collect minerals, especially smithsonite because of its many colors, including black and white.

Where is the most memorable place you have traveled to?

My early meteorite related trips were to London and Moscow, where I met many of the giants of meteorite legend, including Krinov.

Do you have any advice for young scientists and students?

My advice to students is follow your interests. Who knew when I was in grade school that I would end up doing 200 analyses of lunar samples? ♦

IN MEMORY OF HUGH DOWNS

BY DIANE SIPIERA

Back in spring 1992, Paul and I had the opportunity to host Hugh Downs and his wife Ruth at a fundraising dinner for the Adventurers Club in Chicago. We were responsible for picking them up at O'Hare Airport on Friday evening, taking them to the hotel, and then returning them back safely to the airport on late Sunday morning. The Master of Ceremony was Jim Fowler from *Mutual of Omaha Wild Kingdom* and Hugh Downs from *20/20* was the guest speaker. What a treat for us, since we were admirers of both celebrities. Paul and I were not familiar with the protocol of how to host celebrities. We had my Volvo station wagon as our delivery vehicle.

When we arrived at the airport and knew of Hugh's flight plan, we thought we had it all down. We knew Hugh and his wife Ruth would be flying in from New York around 7:00 p.m. and didn't want to be late. We got to O'Hare around 6:15 and thought we would have a relaxing large yogurt cone since we had 45 minutes to spare. As many of our PSF members know, Paul has a sweet tooth. We started eating our cones and before we knew it, an announcement came over the PA system that their flight had already landed. We quickly tried to down our ice cream, which we did and our tongues were so frozen. We went to the gate agent and tried to tell him who we were looking for but our frozen tongues just couldn't get the words out. The man laughed and said that various people and celebrities had a different location away from the public to be met at. We hurried to the right location and there was Hugh and Ruth. We did quick introductions and Paul went to get the car. They were an extremely kind couple.

Once in the car, everyone seemed very comfortable and somewhat chatty. Paul and I sat in the front seat and Hugh and Ruth in

the back. Since they seemed very open minded and thoughtful, I thought it was fair game to ask questions. Hugh would ask Paul questions about being a New York Explorer's Club member and various science topics. When I turned around to ask a question to the couple, they were kissing each other. Both Paul and I got the giggles, Paul stated, "No Paddy Fingers in the back seat." Hugh lost it with laughter and said he hadn't heard that statement in a long

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Paul and I were not familiar with the protocol of how to host celebrities and picked Hugh Downs and his wife up in our station wagon.

time and found it amusing. He also stated that he was still very much in love with Ruth and needed her to know that he still loved her. Paul and I chuckled too, to see a couple married that long who still showed each other that type of affection. We arrived at the hotel where we were all staying. Paul grabbed their luggage to take it to their room. While in front of their door, Paul said, "Can I trust you kids on your own or do I need to chaperon the two of you?" Once again, the two of them laughed as teenagers and said they would be fine. They stated that they would not need us during the Saturday morning and in the afternoon, but would meet us downstairs for the event on Saturday evening.

At the event, Jim Fowler had

various animals for entertainment. The funniest part was that before Hugh went on, this monkey would not get off of Hugh's back. Of course the attendees found it extremely humorous and even Hugh did, too. He gave an excellent presentation on how important it is to save our various natural forests for the future. As the evening concluded, Hugh came over and we were able to discuss Sunday's events. On the ride back to the airport we talked about Barbara Walters and his appreciation of her being a spectacular journalist and that they knew each other for many years. Ruth agreed that Barbara and Hugh were great together and gave us some personal insight. Once we got to the airport, Hugh asked us to put him on the PSF Newsletter mailing list, and he would look forward to receiving his issues.

A few years later, we had the opportunity to attend an Explorers Club dinner in New York. Hugh was there with Ruth. He meets thousands of people each year and we knew he probably wouldn't remember us. But when we went to greet them and told them how we met, he chuckled that he remembered us picking them up with a station wagon, Paul said, "No Paddy Fingers" and he loved reading our newsletter because it was real and to keep him on the list. In fall of 2007, our PSF editor, Andrea Nolan, reached out to him to participate in the Member's Spotlight. He was delighted to do so.

PSF will miss Hugh and his caring for all humanity. He thought everyone had a purpose in life and he truly was the lucky one. He loved his wife dearly and retired in Arizona. In 2017 Ruth passed away at age 95 and this July 2020, Hugh passed away. He was 99 years old. They both lived a fulfilling life of adventures together and will be missed.

MEMBER SPOTLIGHT: Hugh Downs

The following questions and answers are taken from PSF's Fall Newsletter –Volume 17, No. 3, "Member Spotlight on Hugh Downs". (Interviewed by Andrea Nolan in 2007)



Where did you attend school and what did you study?

My academic education is unusual. After graduating from high school I had one year of college on a scholarship and went right into broadcasting as a teenager. This first year was at Bluffton College, Bluffton, Ohio (now Bluffton University). In the years that followed I attended, by moonlighting, Wayne University in Detroit (now Wayne State), New York City College, Columbia University, New York (where I studied astrophysics under Lloyd Motz), Hunter College, where I garnered some credentials in Social Gerontology, and Mt. Sinai Medical School for a certificate in Geriatric Medicine. I have audited classes at several universities, and now lecture at Arizona State, mostly in my own School. The university upgraded its Communication Department into a school, and named it the Hugh Downs School of Human Communication. The things I am most interested in learning about are

Advanced Theoretical Physics, Astronomy, Life Sciences, Paleontology, and Cybernetics.

You are most recognized as the Emmy Award-winning co-anchor for the news television show, 20/20. What are your other achievements in television and what did you enjoy most about your career?

I anchored 20/20 on ABC for 21 years, (with Barbara Walters as a co-anchor for 16 years). I enjoyed hosting the TODAY Show for 10 years (1962 to 1971) and PBS's "Live from Lincoln Center for ten years (1978 to 1998). I enjoyed 20/20 the most because of its being a multi-subject hour, where news features could be developed more extensively than the headline type of news in network newscasts. I think what I enjoyed most about my broadcasting career was hearing from viewers who said they had benefited from some segment on health--that they felt their life had been saved or their quality of living enhanced.

What are some of your greatest accomplishments in the area of space?

I suppose the most gratifying experience regarding space travel was the opportunity to take the same training John Glenn did for his return to space on the Shuttle mission he participated in. NASA did not want 20/20 to photograph or film Glenn's training--and I agreed with them since to let us in would be to let all the press in and that would have harmed the training program. My producer said to NASA "Downs is

the same age as Glenn. Could we film him doing the training?" And they said OK. So I did just about all of it--explosive decompression, hypoxia tests, weightless maneuvers in the gutted plane that can produce weightlessness in 30-second intervals. I have had a total of 48 minutes of weightlessness at Wright Field in Dayton and at the Johnson Space Center in Houston, and it was the most fun I have ever had. I felt I qualified and would love to have gone on that Shuttle mission, but I didn't get to.

What are some of your most memorable achievements or experiences?

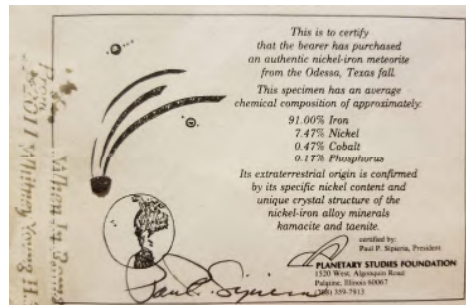
Two things in the way of 'achievement' stand out in my mind. Neither has any socially redeeming value but they mean a lot to me. In 1982, in connection with the National Science Foundation, I moved the South Pole to a corrected position. A new Polar satellite allowed refinement of measurement of where the axis of the Earth comes out through the ice--to within 20 inches accuracy. (This is stunning for a globe 8000 miles in diameter!). I have the paperwork at home for how they did this, but they invited me, since I was down there at that time to be the one who moved it to its corrected position. Also I got satisfaction from the publication of a paper I did for the astrophysics course at Columbia on scale-modeling the universe, which was published later in Sky & Telescope Magazine. ♦

SMALL MEETING, BIG IMPACT

You never know where or how you can influence an individual. But, once in a while someone who has courage will come forth and express their gratitude. This past May, Ismael Cuevas contacted the Planetary Studies Foundation to express his gratitude for an event long in the past. What an impact this small organization can make!

Hello Paul,

My name is Ismael Cuevas, I am a resident of the City of Chicago. I recently did some spring cleaning at my mother's house and found some stuff from my childhood. I came upon a sample meteorite. If I recall correctly, I was probably a 3rd or 4th grader (late 90s) and was obsessed with anything in regards to space and space travel. I have a vague memory of being at the Navy Pier Crystal Gardens and there was some exhibit of some sort. I know your table was there because there was a display of various space artifacts. At the time I didn't speak English and we probably didn't communicate much but I remember going up the table multiple times. Finally, a gentleman called me back to the table and signed this sample that I have attached and handed it to me.



Not sure if it was you or someone else, but thank you to whoever it was from PSF for gifting this to me as a child. I ended up being completely inspired by science at a young age and always kept this meteorite as a type of reminder for scientific thought and exploration. I ended up going to the Chicago City Science fair twice in middle school and high school. As an undergrad at UW-Madison, I was part of the McNair Research program and I ended up getting my Masters in Mexican American Studies at UT-Austin.

Just wanted to thank you and the PSF for contributing to my scientific growth.

*Thank you,
Ismael*



Ismael,

What a wonderful surprise and your communication really made my day!

It's so nice to see that our efforts to inspire children to appreciate and study science does "pay off". You are an excellent example of that. I do remember the event at Navy Pier and I'm so glad we had a chance to meet and that you still have that little meteorite. Yes, I'm the one who signed it and your story of how it happened was VERY NICE. I'm so glad our paths had crossed at that time and I want you to know that the Planetary Studies Foundation is still doing a good job inspiring young people like you.

I would appreciate it if you would give me your mailing address so that I can send you a little bit larger meteorite than the one on the card. If that little guy did so much for you I can only guess what a much larger specimen could do. I really appreciate your e-mail and recollection of our meeting. Thank you so much for taking the time to contact me.

*Sincerely,
Paul*

Dr. Sipiera,

I am happy to hear from you and to know that my and your memory serves well. By any chance do you know what was the event at Navy Pier about? I know my parents would randomly take my siblings and I there on weekends. As a matter of fact, mentorship was really important to my success especially growing up as a first generation Latino immigrant. To this day, I still mentor students, mostly college and graduate students.

In the picture (top right), I am on the right with my hands up next to my younger brother. The picture beneath is me in front of the Vostok Rocket at the Cosmonautic and Aviation Center in Moscow. I appreciate the work of the PSF in inspiring the next generation and would certainly like to meet you in person once the curve is flattened. I actually work for an alderwoman in the Chicago City Council. We were in talks with the Adler Planetarium and the Chicago Astronomical Society about moving the aging telescope at the Adler to the Steelworkers Park in the far southeast side of Chicago, and continuously advocating the Chicago Park District to acquire this telescope for our community. Interesting how the world all works out.

I appreciate the larger meteorite. This is going to be a cool story to tell my family and friends.

Thank you,
Ismael

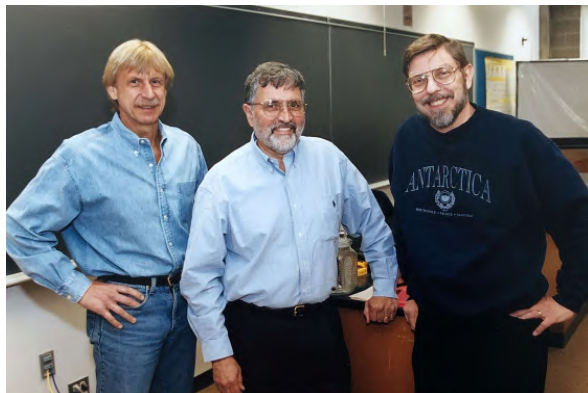


SPRUCING UP DURING THE DOWNTIME

The 1876 Banwarth House and Museum received a much-needed face lift this summer. Klippert Painting and Staining did a fantastic job painting the house, the garage, and all of the trim work. The Banwarth is all ready to invite visitors back inside, as soon as we can reopen! Go online at planets.org to check out the Banwarth pictures in color in the "Newsletter Archive."



ANOTHER BLAST FROM THE PAST



Jerry Marty (former South Pole Station Manager), Jack Schmitt (Apollo 17 Astronaut), and Paul Sipiera at Harper College in Palatine, IL for a talk by Jack Schmitt in 2001.



Edgar Mitchell (Apollo 14 Astronaut), Dr. Betty Hull (Harper College professor) and her late husband Frederik Pohl (renowned science fiction writer) at the 2004 PSF Fundraising Dinner.



Richard Leary (Geology Curator Emeritus of the Illinois State Museum, left) and Diane Sipiera (right) dropping off Sam Durrance (Shuttle Astronaut, middle) at O'Hare Airport after the 1997 PSF Fundraising Dinner.



Frederik Pohl, Greg Jerman (NASA Marshall Space Flight Center), and Paul Solarz (Grade School Teacher and Author) receiving awards at the 2004 PSF Fundraising Dinner.



Members at the 1992 PSF Fundraising Dinner featuring Alan Bean. Top left: Mary (PSF Founding Member) and Alan Becker. Top Right: Jim Schwade (Meteorite Collector). Bottom middle: Mary Sue (Engineering Geologist) and Bill Coates. Bottom right: JoAnne Schwade.

A SUMMER AFTERNOON AT THE PUTNAM MUSEUM

In the fall of 2019, the PSF was asked to help the Putnam Museum's education department in their summer 2020 children's programming. Because of the COVID-19 pandemic, numerous businesses closed down, and museums too had to reinvent themselves. Besides social distancing, wearing masks and smaller groups; it made it difficult for many of them to offer summer children's workshops. Museums were not sure if and when they would be open to the public again.

Finally, in July, the Putnam was able to provide a one-week children's workshop on "Space." PSF vice-president, Caroline Sipiera, and PSF member, Maddie Havlik, had the opportunity to work with these nine

children on the topic of meteorites. Caroline and Maddie provided children with their own hands-on materials to show the properties of a meteorite and how it physically impacts our earth.

For approximately an hour and a half, they entertained the children with various facts and experiments. Putnam instructor, Lakin Sheeder, appreciated the Planetary Studies Foundation for coming in to help instruct on a topic of meteorites that she was not familiar with.



Top: Maddie Havlik sets up an experiment to demonstrate meteorite impacts, which is always a hit with young students. At left: Students pose with their model of the solar system.

At right: Caroline Sipiera instructs students on the different types of meteorites.



This July, PSF facilitated the donation of this 8 inch Celestron telescope to Savannah Howell, who will use it to further her studies of the night sky with her father. A generous donor, Barbara Alexander, gave the telescope to PSF, and The Organization for the Proliferation of Space Studies (TOPSS) helped find the perfect student to pass it on to.

From left to right: Grant Harkness (TOPSS), Savannah, Diane Sipiera, Paul Sipiera.

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
 Contributing Membership ___ \$ 100.00 1 year **or** ___ \$180.00 for 2 years
 Student Membership ___ \$ 10.00 1 year
 Life Membership ___ \$ 500.00
 Please accept this donation ___ \$ _____

Name: _____
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Please mail the membership form
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 Galena, IL 61036

For more information about our mission
 and upcoming events, visit:

www.planets.org



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Doug Firebaugh Observatory

& 1876 Banwarth House & Museum



In addition to donations and dues, you can help contribute to the PSF by participating in Amazon's charitable program.

- **SELECT THE PSF:** Search Amazon Smile and select the Planetary Studies Foundation as your charity.
- **START SHOPPING:** Be sure to start each purchase at smile.amazon.com and the PSF will receive .05% from all eligible purchases. You can bookmark the webpage to make sure you don't forget this important step.
- **SPREAD THE WORD:** Encourage your family and friends to choose the PSF, too. Amazon earned over \$232 billion in revenue in 2018 alone — help us receive a tiny piece of that pie! — it's free to you and helps us earn valuable funds.