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The Guide Star

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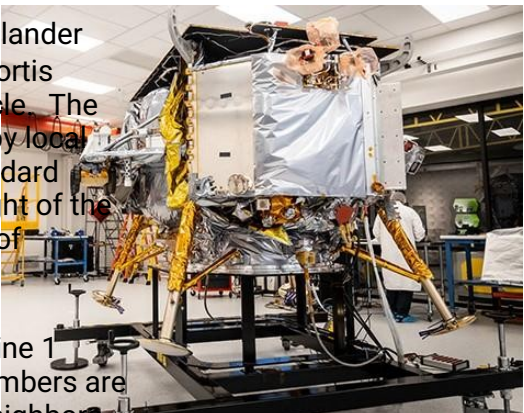


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Astrobotic's Peregrine Lander and Mission Described at Feb. 10 Meeting

February Talk: "All About the 'Yinzer' Moon Lander"

Sometime in late March or April, the first U.S. lunar soft lander since Apollo 17 will touch down on the Moon's Lacus Mortis region. But that's not the headline story about this vehicle. The lander, named "Peregrine", was built here in Pittsburgh by local robotics startup Astrobotic Technology, not by JPL, Goddard Spaceflight Center or Lockheed Martin. As such, the flight of the Peregrine 1 mission to the Moon is certain to grab a lot of attention in the local media, not to mention nationally.



At the club's February 10, 2023 meeting, long-time club member **Eric Fischer** will give an overview of the Peregrine 1 lunar mission. When the mission takes flight, AAAP members are certain to be bombarded with questions from friends, neighbors and co-workers about the lander and it's mission. Eric will describe the beginnings of Astrobotic, the NASA "CL" program that is promoting this and similar missions, the Peregrine mission profile, plus the various scientific and 'human interest' payloads (e.g. human ashes and a pop can) aboard the lander. Future, more ambitious Astrobotic missions to the Moon will also be described. Eric currently serves as a Gallery Host at the Moonshot Museum attached to Astrobotic.

WOW! Astrobotic Technology is located only two blocks from the site of the Calvary Community House where the first AAAP meeting was held June 9, 1929.

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Hot Off the Presses: 2023 Star Party Schedule

It took us a little longer than usual to compile the 2023 star party schedule for Mingo and Wagman Observatories. The Executive Committee was trying to minimize overlapping events not only between the observatories, but with other events such as the annual Allegheny Observatory Open House (first time in three years). The schedule is now nailed down, we will start pushing out literature, business-size schedule cards and tri-fold brochures. Thanks for your patience during this process. The full 2023 schedule is shown on page 3. Note: As of Guide Star press time, our 3ap.org web site had the party of the year listed as March 13. The correct date is March 12. We will be correcting this soon for the benefit of public visitors to our website.



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Pittsburgh-Built Peregrine Lander to Plant Itself On Moon

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- Zoom-Only Meeting: The Feb. 13 meeting starts promptly at [7:30 pm](#) and will be convened on the Zoom platform only. The link to the Zoom meeting will be sent out via the new Guide Star Express service. Zoom is proving to be a very popular meeting format for club members (nearly 50 members at Jan. 13 meeting). The Executive Committee is considering whether to discontinue in-person or hybrid Zoom/in-person meetings, except for November, December and May. You'll know when your Guide Star Editor knows. :-)



- Come On Down to the Moonshot Museum: The museum's big attraction are windows into Astrobotic's clean rooms where visitors can observe bunnys-suited workers assembling and testing various spacecraft. As of Guide Star press time (Jan. 30), Peregrine had returned to Astrobotic from off-site testing in Huntsville, AL. But no schedule was given for shipping out the lander to Cape Canaveral. Check the Moonshot Museum's web site for the latest information before you visit: <https://moonshotmuseum.org/>. Above photo: AAAP members from the Noll family visit the Moonshot Museum while Peregrine lander (rear) was undergoing final checks: Left to right: Diane Mussi, Faith Noll, Maria Noll, Randy Noll, Chet Noll.

2023 Gate and Door Lock Changes at Wagman and Mingo

Now that we're past New Year, we change lock combinations at both observatories for security purposes. Here's what you need to know for each facility:

- Wagman: To obtain the new gate keys and door code for 2023, please contact Associate Director **Bill Yorkshire** (wildyork@verizon.net). Bill can also explain the rules and requirements for obtaining keys and codes in the first place. You must be an AAAP member in good standing with up-to-date paid dues.
- Mingo: Procedures are similar to Wagman. Lock combinations will change after Feb. 1. When that happens, members will be notified through our usual information channels (Guide Star Express, listserver, social media, etc.) or contact Mingo Director **Brian Crawford** (briancrawford01@gmail.com;) if you have any questions.



As a reminder, the latest Wagman and Mingo combinations are posted on the "Important Notices" section of the club's 3ap.org web site. Thanks for your understanding and cooperation.



Not Too Early to Plan 2024 Solar Eclipse Trip

Even though the next cross-continent Total Solar Eclipse is not until April 8, 2024, people may already making reservations for motel/hotel rooms, campsites, RV parks, etc. During the 2017 eclipse, several groups ventured west and south to position themselves on the center line of Totality. If you're interested in forming up an AAAP Eclipse expedition, contact **Chuck Pipich** (chuckp212@gmail.com;) to discuss plans. Other club members are welcome to report their 2024 eclipse travel plans in the Guide Star.



(Note: **John Pane** took the 2017 eclipse photo (at right) in Torrington, Wyoming. During this year's star parties, check out his metallic-printed eclipse photos in the Wagman reception room and Mingo planetarium.)





2023 Public Star Party Schedules for Mingo and Wagn Observatories

Mingo Creek Park Observatory



- [April 22, 2023](#): Solar Observing Starts 6:00 pm
- [May 26, 2023](#): Solar Observing Starts 6:15 pm
- [May 27, 2023](#): Solar Observing Starts 6:15 pm
- [June 16, 2023](#): Solar Observing Starts 6:45 pm
- [June 17, 2023](#): Solar Observing Starts 6:45 pm
- [July 21, 2023](#): Solar Observing Starts 7:00 pm
- [July 22, 2023](#): Solar Observing Starts 7:00 pm
- [August 11, 2023](#): Solar Observing Starts 6:30 pm
- [August 12, 2023](#): Solar Observing Starts 6:30 pm
- [September 22, 2023](#): Solar Observing Starts 5:30 pm
- [September 23, 2023](#): Solar Observing Starts 5:30 pm
- [October 6, 2023](#): Solar Observing Starts 4:30 pm
- [October 7, 2023](#): Solar Observing Starts 4:30 pm
- [November 11, 2023](#): "Bundle-Up Star Fest" - No Solar Observing

Nicholas E. Wagman Observatory



- [March 31, 2023](#): Starts 7:30 pm
- [April 1, 2023](#): Starts 7:30 pm
- [April 28, 2023](#): Starts 8:15 pm
- [April 29, 2023](#): Starts 8:15 pm
- [May 26, 2023](#): Starts 8:30 pm
- [May 27, 2023](#): Starts 8:30 pm
- [June 23, 2023](#): Starts 8:45 pm
- [June 24, 2023](#): Starts 8:45 pm
- [July 21, 2023](#): Starts 8:45 pm
- [July 22, 2023](#): Starts 8:45 pm
- [August 25, 2023](#): Starts 8:15 pm
- [August 26, 2023](#): Starts 8:15 pm
- [September 23, 2023](#): Starts 7:30 pm
- [October 14, 2023](#): Starts 7:00 pm
- [October 21, 2023](#): Starts 6:30 pm
- [November 18, 2023](#): "Mid-to-Late Autumn Star Party" – Starts 6:15 pm

Donated Telescopes, Books, Etc.

- Sorry, we can't take donations of astronomical equipment, books etc. since we have very limited storage space in our observatories. However, we are glad to place your donations in the "Classified Ads" section of the Guide Star newsletter. Contact Editor **Eric Fischer** (ericfischer501@gmail.com) to submit your ad.



We “Link” You to the Universe

- A link to “New Moon Atlas - Atlas Duplex Moon” was recommended by **Terry Trees**. The link was originally posted on the “Cloudy Nights” web site:

<https://www.astroshop.eu/sky-atlas/oculum-verlag-atlas-duplex-moon/p.77260?https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.astroshop.eu%2Fsky-atlas%2Foculum-verlag-atlas-duplex-moon%2Fp%2C77260&data=05%7C01%7C%7Ce1df4f1438b5490780b208daf998c900%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C638096731853820987%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IjkihaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=6wM8VOCyFmHubTwW4RWtbEI9DsL2Zu9QYYbz42qcZmU%3D&reserved=0>

- **Dan Peden** sends along a link to an easy-to-read calendar of astronomical events:

https://starwalk.space/en/news/astronomy-calendar-2023?utm_source=Facebook&utm_medium=ArticleCalendar2023&utm_campaign=AstroCalendar2023&fbclid=IwAR2VvEWG9nPnkMeZTgfErX-LkQQUeE66MBFitU1q3kHrNI1y1dRS3I

- **Eric Fischer** found this calendrical (yes, that’s a word) site. In addition to Solar System events, the site includes favorably-placed deep-sky objects and visible asteroids, plus favorably-placed deep-sky objects:

<https://in-the-sky.org/newscal.php?year=2022&month=12>



When and Where to See Lunar “X” and “V” Features Th

Waxing or waning, the Moon’s Terminator is fascinating terrain to explore, with all manner of Sun-lit and shadow patterns coming and going. Two of these are sometimes known as the Lunar “X” and “V”. The chart below, forwarded by **Terry Trees**, shows the places and times to observe these temporary features. The chart was prepared by Lisa Ann Fanning who lives in New Jersey, but is a member (like Terry) of the Royal Astronomical Society of Canada (RASC), Halifax Centre. If you find these features, let us know! A few pics would be nice too

“LUNAR X” & “LUNAR V” visibility 2023 (translated from UTC to ET)

	UTC Time	To ET		Dark or Light sky
January	29; 00:37	01/28/2023	7:37 PM	Dark
February	27; 15:02	02/27/2023	10:02 AM	Light
March	29; 04:59	03/28/2023	11:59 PM	Dark
April	27; 18:10	04/27/2023	1:10 PM	Light
May	27; 06:28	05/27/2023	1:28 AM	Dark
June	25; 18:02	06/25/2023	1:02 PM	Light
July	25; 05:07	07/25/2023	12:07 AM	Dark
August	23; 16:07	08/23/2023	11:07 AM	Light
September	22; 03:26	08/21/2023	10:26 PM	Dark
October	21; 15:27	10/21/2023	10:27 AM	Light
November	20; 04:23	11/20/2023	11:23 PM	Dark
December	19; 18:16	12/19/2023	1:16 PM	Light

