



Mid-Hudson Astronomical Association

August, 2022

Website: www.midhudsonastro.org

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groups.io Group: mhaa.groups.io

Vice President: Dave Sherman
Treasurer: Eric Myers
Membership Coordinator: Eric Myers
Webmaster: Steve Dittmar
Outreach: Joe Macagne
College Liaison: Dr. Amy Bartholomew



The next meeting is August 16th, 2022, on Zoom and in person. Check MeetUp for details and link. Link will be sent to all those that RSVP.



August Speaker

Dr. Eric Myers of SUNY New Paltz will do a live demonstration showing the size and positions of our solar system objects. Participants will walk through his solar system model on the campus at New Paltz. The event will be held at 8 PM starting across from the planetarium at the Coykendale Science building. Participants are welcome to attend the monthly business meeting of the Mid Hudson Astronomical Association at 7:30 preceding the demonstration in the lecture hall across from the planetarium.

The Thousand Yard Model of the Solar System, sometimes called the "peppercorn model," shows the relative sizes of the planets and the distances between them at the same time on the same linear scale. The Sun is the size of a bowling ball or a soccer ball, and the Earth is then the size of a peppercorn about 26 yards away. MHAA has set up the model on the Walkway Over the Hudson for many Walkway At Night events, but this is not the only way to experience the model.

Myers will take our group through the model in a different way, presented in a somewhat mysterious fashion that is appropriate for those who are not already familiar with the solar system, especially students. Teachers may therefore find this particularly interesting. This will be a leisurely evening walk on the SUNY New Paltz campus from the Planetarium to the Observatory, with plenty of opportunity to chat with other participants about the solar system, or astronomy in general, or anything at all.

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Online link to the MHAA monthly Business Meeting Agenda:

<http://mhaa.midhudsonastro.org/agenda>

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There was a snafu with the minutes. They are absent this month.

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## Webmaster Update

Status: Migration to website managed memberships

Several of our elected officials have completed the new MHAA website account creation to migrate their membership to be web-managed. Their feedback led to a couple of minor clarifications in the instructions. The few who did not create their accounts yet will be sent a follow up email soon.

We'll soon be ready to roll out the same process to our regular members and enable new member signup directly through the website. I will plan a website walk through to show the current and planned features ahead of that.

MHAA website URL change

It made sense to finally migrate our website URL to the more obvious and standard [midhudsonastro.org](http://midhudsonastro.org) or [www.midhudsonastro.org](http://www.midhudsonastro.org), thereby removing the "mhaa" subdomain at the beginning. As of 8/11 this URL migration is complete, so please use either of the new URLs when directing guests etc to our website.

Previously, those URLs redirected visitors to our Meetup group. Going forward, use <http://meetup.midhudsonastro.org> or the actual Meetup URL, [meetup.com/mhastro](http://meetup.com/mhastro).

The old URL, [mhaa.midhudsonastro.org](http://mhaa.midhudsonastro.org), will redirect to [midhudsonastro.org](http://midhudsonastro.org) but should be avoided and considered deprecated as it may eventually be deleted.

If you experience any issues with these URLs please let me know.

Steve Dittmar,  
Webmaster

## **MHAA Treasurer's Report for August 2022**

As of 14 August 2022 we have \$3873.16 in our bank account and \$1221.06 in our PayPal account, with the Treasurer holding \$340 in petty cash. Our monthly Zoom subscription of \$14.99 is expected to be paid automatically via PayPal tomorrow. Since last month's report we have received \$99.12 for one new membership and three renewals. Yesterday we received a donation of \$300 for a star party at a wedding reception held at Gather Greene near Coxsackie; I will deposit the cash into our bank account sometime this week.

The club held our first (annual, we hope) club picnic on July 23rd at the Field of Dreams Park outside of New Paltz, with 24 people in attendance. The total cost to put on the event was \$854.31, with \$100 of that paid to the Town of New Paltz to rent the pavilion, and the rest for food, drink, and supplies (paper plates and napkins and plastic cups and utensils). Members paid \$10 each, with some paying the non-member \$15 for spouses, resulting in the collection of \$280, resulting in a net expense to the club of \$574.31. There was way too much food left over, but fortunately it did not all go to waste, as the two remaining big sandwiches were cut up and wrapped up and then placed in the New Paltz food fridge, and local social workers who have clients who might be food insecure were notified. The organizers and the President and Treasurer held an After Action Review a few days later to discuss ideas to improve future picnics. Notes from this meeting are in the on-line Datastore in a subfolder of the Events folder.

To continue to use Google Drive to store club files (the "Datastore" mentioned above) we will soon have to pay a small monthly fee to Google. Working with our Webmaster, Steve Dittmar, I set up the billing for that, so that it will automatically be paid via PayPal every month. But the first month (September) is free. Steve and I have assessed how we can cut back on the services we use to lower the expense, but it's not expected to be very much in any case.

We can likely get Google to give us the storage for free if we can convince them that we are a non-profit organization, but to do that will require a formal "letter of determination" to that effect from the IRS. I've continued to research the process of applying for that letter, primarily by reading IRS publication 557. It's clear that we should qualify as a non-profit, but it seems we may need to amend our by-laws slightly to make receiving that classification a sure thing. I want to keep reading to collect all changes (which I expect to be minor) so that we can vote on all of them at one business meeting in the fall (when we have more members in attendance).

Respectfully Submitted,  
Eric Myers  
Treasurer

## **MHAA Membership Report for June 2022**

As of 14 August 2022 the club has 66 members in good standing and 4 lapsed memberships, of which 2 expired over a year ago. We still have 12 Lifetime members and 2 student members. This month we welcomed 1 new member and had 3 renewals of existing memberships.

Respectfully Submitted,  
Eric Myers  
Acting Membership Coordinator

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This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Artemis 1: A Trip Around the Moon – and Back!

by David Prosper

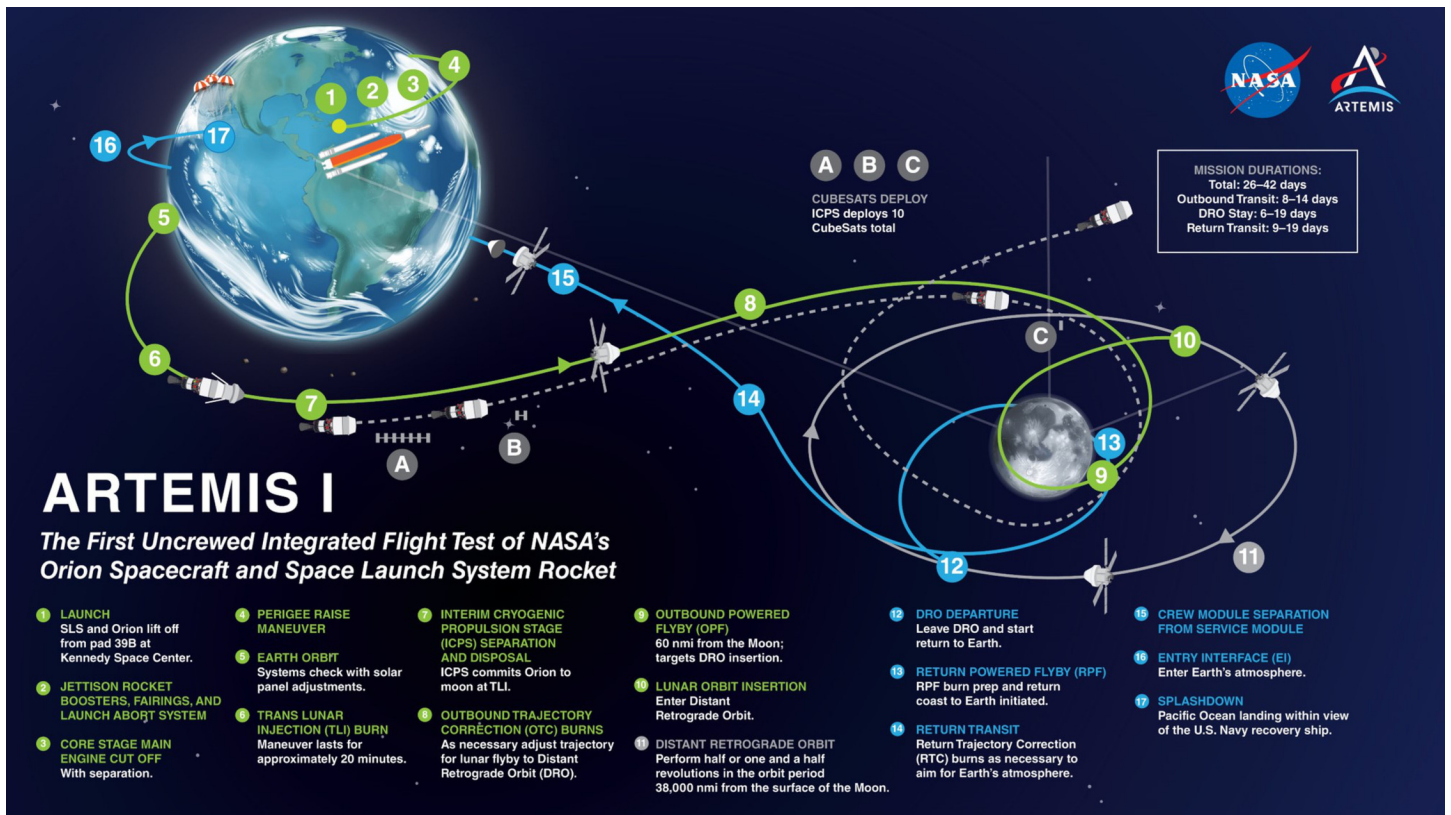
We are returning to the Moon - and beyond! Later this summer, NASA's Artemis 1 mission will launch the first uncrewed flight test of both the Space Launch System (SLS) and Orion spacecraft on a multi-week mission. Orion will journey thousands of miles beyond the Moon, briefly entering a retrograde lunar orbit before heading back to a splashdown on Earth.

The massive rocket will launch from Launch Complex 39B at the Kennedy Space Center in Florida. The location's technical capabilities, along with its storied history, mark it as a perfect spot to launch our return to the Moon. The complex's first mission was Apollo 10 in 1968, which appropriately also served as a test for a heavy-lift launch vehicle (the Saturn V rocket) and lunar spacecraft: the Apollo Command and Service Modules joined with the Lunar Module. The Apollo 10 mission profile included testing the Lunar Module while in orbit around the Moon before returning to the Earth. In its "Block-1" configuration, Artemis 1's SLS rocket will take off with 8.8 million pounds of maximum thrust, even greater than the 7.6 millions pounds of thrust generated by the legendary Saturn V, making it the most powerful rocket in the world!

Artemis 1 will serve not only as a test of the SLS and the Orion hardware, but also as a test of the integration of ground systems and support personnel that will ensure the success of this and future Artemis missions. While uncrewed, Artemis-1 will still have passengers of a sort: two human torso models designed to test radiation levels during the mission, and "Commander Moonikin Campos," a mannequin named by the public. The specialized mannequin will also monitor radiation levels, along with vibration and acceleration data from inside its mission uniform: the Orion Crew Survival Suit, the spacesuit that future Artemis astronauts will wear. The "Moonikin" is named after Arturo Campos, a NASA electrical engineer who played an essential role in bringing Apollo 13's crew back to Earth after a near-fatal disaster in space.

The mission also contains other valuable cargo for its journey around the Moon and back, including CubeSats, several space science badges from the Girl Scouts, and microchips etched with 30,000 names of workers who made the Artemis-1 mission possible. A total of 10 CubeSats will be deployed from the Orion Stage Adapter, the ring that connects the Orion spacecraft to the SLS, at several segments along the mission's path to the Moon. The power of SLS allows engineers to attach many secondary "ride-along" mission hardware like these CubeSats, whose various missions will study plasma propulsion, radiation effects on microorganisms, solar sails, Earth's radiation environment, space weather, and of course, missions to study the Moon and even the Orion spacecraft and its Interim Cryogenic Propulsion Stage (ICPS)!

If you want to explore more of the science and stories behind both our Moon and our history of lunar exploration, the Night Sky Network's Apollo 11 at 50 Toolkit covers a ton of regolith: bit.ly/nsnmoon! NASA also works with people and organizations around the world coordinating International Observe the Moon Night, with 2022's edition scheduled for Saturday, October 1: moon.nasa.gov/observe. Of course, you can follow the latest news and updates on Artemis 1 and our return to the Moon at nasa.gov/artemis-1



Follow along as Artemis I journeys to the Moon and back! A larger version of this infographic is available from NASA at: nasa.gov/image-feature/artemis-i-map

2022 Star Party Schedule

February 4	5:00 PM
March 4	5:30 PM
April 1	7:00 PM
April 29	8:00 PM
May 27	8:30 PM
July 1	8:30 PM
July 29	8:00 PM
August 26	7:30 PM
September 23	6:30 PM
October 28	6:00 PM
November 26	4:30 PM
December 23	4:30 PM



Directions To The Star Party Site

[Lake Taghkanic State Park](#) is in the town Ancram, NY. The park entrance is on the Taconic Parkway 10 minutes north of the exit used for Wilcox park.

Star Parties at Lake Taghkanic are held in the West Parking lot, next to the beach. The skies are darker than in Wilcox, with less stray light to deal with. The horizon is also much lower, especially to the south and east, making many more targets possible.

IMPORTANT: all events at Lake Taghkanic State Park require an **RSVP** which includes license plate number of the car you are bringing (please do so via [Meetup](#)). The park is patrolled by state police, and all non registered cars will be ticketed and risk our use of the park.

General Information:

- ♦ Dates listed for star parties are the primary dates. The rain date is the following night unless otherwise noted. Only one session is held for a given weekend, usually on the primary date, Friday, unless postponed (usually due to inclement weather) to the backup date, Saturday. Exceptions to this are noted in the "Scheduled Events" section above.
- ♦ All outdoor events are FREE! All are welcome. If you bring small children, it is **your** responsibility to keep a close eye on them. Please do not bring white-light flashlights. Instead, bring a red astronomer's flashlight or an ordinary flashlight covered with several layers of red cellophane. If in doubt about the weather, check the status of the event at www.midhudsonastro.org.