



February, 2023

Website: www.midhudsonastro.org

President : Jack Chastain
Secretary: Jim Rockrohr
Newsletter Editor: Rick Versace
Publicity: Tim Denman
Speakers: Alexandra Passas

Directors: Alex Passas, Karl Loatman, Steve Dittmar, and Willie Yee

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

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The next meeting is February 20<sup>th</sup>, 2023, on Zoom and in person. Check MeetUp for details and link. Zoom link will be sent to all those that RSVP.

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February Speaker

"How the JWST Will Revolutionize Our Understanding of Planet Formation"
Phoebe Heretz

<https://www.meetup.com/mhastro/events/291387194>

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Online link to the MHAA monthly Business Meeting Agenda:

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

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Minutes of the monthly meeting of the Mid Hudson Astronomical Association, January 17, 2023

The meeting was called to order at 7:30 PM by President Jack Chastain in the Coykendall Science Building Auditorium at SUNY New Paltz and on the online application Zoom.

The minutes of the December meeting as published in the newsletter were unanimously approved after a correction that Joe MacGagne is not reporting on Outreach.

Officer's Reports:

President: Jack Chastain was present.

- Jack reminded the membership to be careful how you represent our club at other meetings.

Vice President: Dave Sherman was present

- Nothing new to report.

Secretary: Jim Rockrohr was present.

- Nothing new to report.

Publicity: Tim Denman was present.

- It's hard to get our meetings posted on Facebook. He is now referring people to MidHudsonAstro.org.

Newsletter: Rick Versace was not present.

- No report.

Treasurer: Eric Myers was present.

- See the newsletter for the latest information.
- Finances are in good shape.
- The annual summary and budget for 2023 will be presented at the March meeting.
- If anyone has suggestions for budget items, let Eric know.
- 501(c)3 Letter – We need some slight changes in our Bylaws and create some Association documents.
 - o We may pursue 501(c)7, Social Club, registration instead.
 - o Eric will research these issues and present plans/options to the board of directors.

Outreach: (Leader needed.)

- No report.

Upcoming Programs: Alexandra Passas was present.

- February and March are covered.
- Working leads for future presentations.
- Additional ideas welcome!

Membership: Rick Versace was not present.

- No report.

Solar System Ambassador: Willie Yee was present.

- Night Sky Awards are coming:
 - o Email nominations to Willie. Candidates must have participated in 2 or more public outreach events during 2022. Our star parties count as public outreach events.

Webmaster: Steve Dittmar was present.

- People are getting signed up.
- We need to renew our web “name”; midhudsonastro.org.
- Looking for a replacement for Slack. (It dumps messages after 90 days.)
- We’re on YouTube at Youtube.com/MHAA.
- Doing other routine web maintenance.

Old Business:

- The last **club star party** was cancelled due to weather.
- **Holiday Dinner** – we had 14 people.
 - o Consensus is to find somewhere else next year.
 - o Also need someone else to organize it.
- Remember to ask people at events how they heard about us and let Tim Denman know.
- The club’s 8” Dob, 13” Dob and 8” Meade telescopes are available to members. There is also a large collection of CDs and several imagers that can be loaned. Contact Jack.

New Business:

- This month’s (January 20) star party will probably be cancelled due to weather.
- There is a Dark Skies bill in the NY state legislature.
 - o Jack has a web link to support it.
- The Poughkeepsie Discovery Museum (formerly the Children’s Museum) is looking for training on their indoor Star Dome. Eric will help them out.
- The comet is coming!

Upcoming events:

- **Next club star party** – February 17th, Lake Taghkanic State Park.
- **Highland Middle School at the Vassar Observatory** – February 1st (Rain date February 2nd).
- **Cahill School Moon Party** – February 3rd in Saugerties.
- **Wedding** – April. Details TBD.
- **Need Presenters!** – Jack needs help with all of the requested events. Please consider volunteering to organize/present events. See Jack.

Observing Reports:

- None given.

The business meeting was adjourned at 8:02 PM. There were 20 Zoom windows open at the end of the business meeting and approximately 9 people were live at the auditorium. **The next meeting is February 20th, 2023, on Zoom and in person. Check MeetUp for details and link. Zoom link will be sent to all those that RSVP.**

The presentation that followed was by Willie Yee, SSA: “The Relationship Between Science and Magic”.

Submitted by James Rockrohr, February 18th, 2023.

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## MHAA Treasurer's Report for January 2023

As of 19 February 2023 we have \$4156.42 in our bank account and \$1764.72 in our PayPal account, with the Treasurer holding \$40 as petty cash. This month we took in \$273.08 for 9 renewed memberships and 2 new members.

This month I paid our annual event insurance bill of \$696.00 (no change from last year), and \$14.99 for 1 month of Zoom Pro of was paid via PayPal on Feb 15th. I've been informed that this will go up by \$1 in March. Our monthly bill for Google gSuite went down to \$17.89 for this month and it should be less next month, because Webmaster Steve Dittmar was able to remove one account from the service. We might be able to remove one or two more accounts, but we do need several to continue existing operations. I reimbursed \$16.18 to Steve for domain registration and \$16.00 to Willie Yee for Night Sky Network Award pins.

I have continued investigating the requirements and procedures for applying to the IRS for a document that would certify our status as a 501(c)(3) non-profit. This would allow us to get Google gSuite services for free, and we might get some kind of benefit from Microsoft. (The Amazon Smile program is being discontinued, so that is no longer a motivation.) After reading through the requirements for various kinds of organizations under section 501 it seemed that we might better fit the definition of a 501(c)(7) organization, which is for clubs where members share common interests (as we do). However, I've determined that we would not qualify, because we have taken in more than 35% of our income from outside donations. It does seem likely that we could meet the requirements for 501(c)(3) but we would have to reorganize our by-laws into separate Articles of Incorporation and Bylaws. One last hurdle I've found is that there is a "user fee" for requesting a Letter of Determination from the IRS, and for us that fee would be \$250. That is more than we will spend in one year on gSuite, but it is only a one-time fee.

Respectfully Submitted,  
Eric Myers  
Treasurer

## MHAA Treasurer's Report for FY 2022-2023

According to club by-laws our Fiscal Year begins March 1st of every year, and the Treasurer is directed to present a proposed budget at the February business meeting. To prepare for the discussion of the budget I report here summaries of our income and expenses for the past year:

### Income

|                                |       |                   |
|--------------------------------|-------|-------------------|
| Dues Paid:                     | (45%) | \$ 1,583.67       |
| T-shirt/swag sales:            |       | \$ 102.00         |
| Event Donations:               | (43%) | \$ 1,374.57       |
| Member Donations:              |       | \$ 56.67          |
| Other Donations                |       | \$ 20.00          |
| Picnic Receipts                |       | \$ 280.00         |
| Credit Interest:               |       | \$ 4.33           |
| Total Income (Gross Receipts): |       | <b>\$3,421.24</b> |

### Expenses

|                      |           |
|----------------------|-----------|
| Insurance:           | \$ 696.00 |
| Zoom:                | \$180.88  |
| Meetup.com:          | \$ 213.72 |
| Google gSuite        | \$ 57.44  |
| Park Permit:         | \$ 25.00  |
| Domain Registration: | \$ 16.18  |
| Equipment:           | \$ 54.25  |

|                     |                   |
|---------------------|-------------------|
| Picnic Expenses     | \$ 854.31         |
| Science Fair Prizes | \$ 90.00          |
| Speakers            | \$ 0.00           |
| Publicity           | \$ 22.61          |
| Other Expenses      | \$ 37.61          |
| TOTAL:              | <b>\$2,224.39</b> |

Our income exceeded our expenses by \$1196.85, and our expenses only exceeded our approved budget of \$2205 from last year by about \$20.

This year we held our first summer picnic, for which the expenses were more than what attendees paid, but that was because we had way too much food (and that was donated to the free food fridge in New Paltz, so we think it did not go to waste). Now that we have more experience we should be able to balance things better the next time.

I will present a proposed budget at the February business meeting. Anybody who wants to have something included in that budget should send it to me.

Respectfully Submitted,  
Eric Myers  
Treasurer

### MHAA Membership Report for February 2023

As of 19 February 2023 the club has 64 paid members in good standing and 13 lapsed memberships, of which 2 expired over a year ago. We have 2 student members and 12 lifetime members. This month we had 9 membership renewals and gained 2 new members.

Our Slack workspace has 74 “regular” members, which does not include 26 deactivated accounts or 44 invitations sent out but not used. We have 2320 “members” who have subscribed to our site on Meetup.com

I’m working with our Webmaster, Steve Dittmar, to transfer the membership coordinator duties to him, as part of moving to the new web site he’s set up. There have been some bumps along the way during testing. If you get a notice that your membership needs to be renewed, but it does not have my name on it then please contact me first before you renew to make sure it’s really time.

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!

Spot the King of Planets: Observe Jupiter

David Prosper

Jupiter is our solar system’s undisputed king of the planets! Jupiter is bright and easy to spot from our vantage point on Earth, helped by its massive size and banded, reflective cloud tops. Jupiter even possesses moons the size of planets: Ganymede, its largest, is bigger than the planet Mercury. What’s more, you can easily observe Jupiter and its moons with a modest instrument, just like Galileo did over 400 years ago.

Jupiter's position as our solar system's largest planet is truly earned; you could fit 11 Earths along Jupiter's diameter, and in case you were looking to fill up Jupiter with some Earth-size marbles, you would need over 1300 Earths to fill it up – and that would still not be quite enough! However, despite its awesome size, Jupiter's true rule over the outer solar system comes from its enormous mass. If you took all of the planets in our solar system and put them together they would still only be half as massive as Jupiter all by itself. Jupiter's mighty mass has shaped the orbits of countless comets and asteroids. Its gravity can fling these tiny objects towards our inner solar system and also draw them into itself, as famously observed in 1994 when Comet Shoemaker-Levy 9, drawn towards Jupiter in previous orbits, smashed into the gas giant's atmosphere. Its multiple fragments slammed into Jupiter's cloud tops with such violence that the fireballs and dark impact spots were not only seen by NASA's orbiting Galileo probe, but also observers back on Earth!

Jupiter is easy to observe at night with our unaided eyes, as well-documented by the ancient astronomers who carefully



This stunning image of Jupiter's cloud tops was taken by NASA's Juno mission and processed by Kevin M. Gill. You too can create amazing images like this, all with publicly available data from Juno. Go to missionjuno.swri.edu/junocam to begin your image procession journey – and get creative! Full Image Credit: NASA/JPL-Caltech/SwRI/MSSS; Processing: Kevin M. Gill, license: CC BY 2.0) <https://creativecommons.org/licenses/by/2.0/> Source: <https://apod.nasa.gov/apod/ap201123.html>

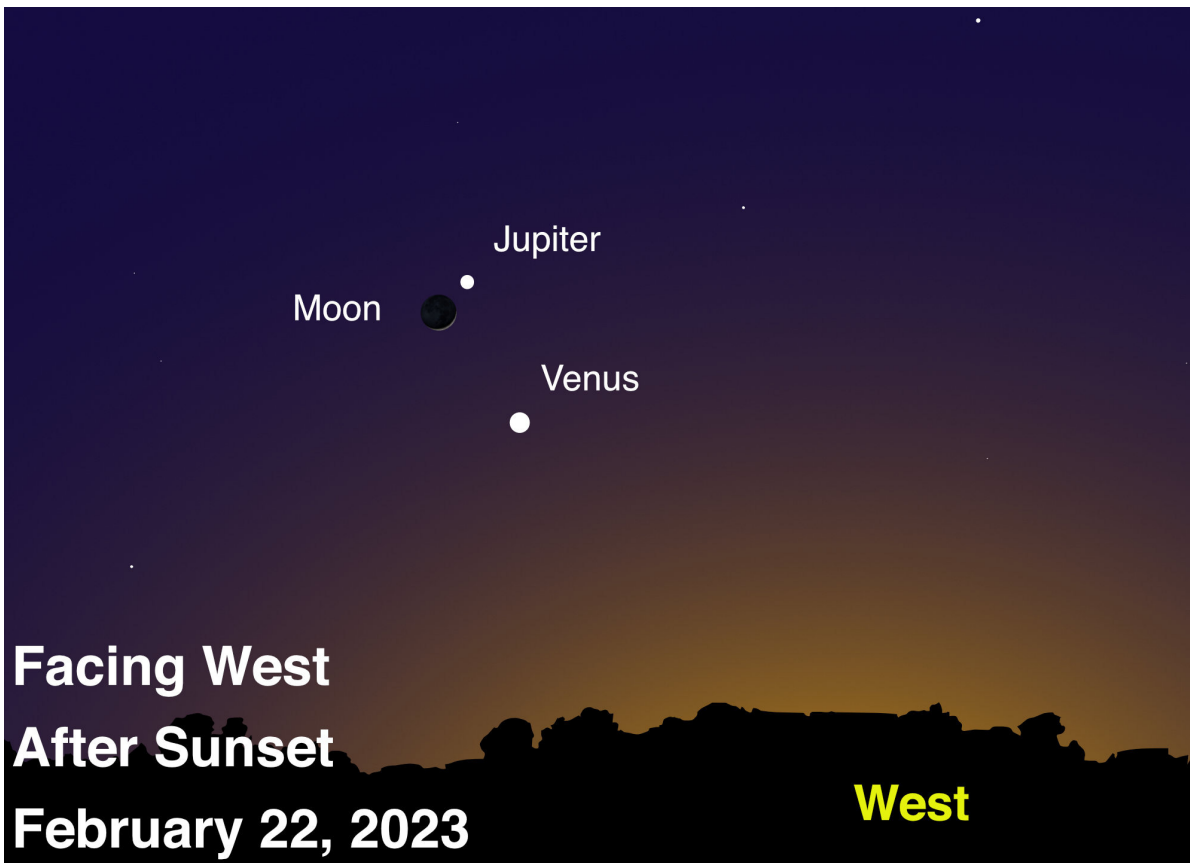
recorded its slow movements from night to night. It can be one of the brightest objects in our nighttime skies, bested only by the Moon, Venus, and occasionally Mars, when the red planet is at opposition. That's impressive for a planet that, at its closest to Earth, is still over 365 million miles (587 million km) away. It's even more impressive that the giant world remains very bright to Earthbound observers at its furthest

distance: 600 million miles (968 million km)!

While the King of Planets has a coterie of around 75 known moons, only the four large

moons that Galileo originally observed in 1610 – Io, Europa, Ganymede, and Callisto – can be easily observed by Earth-based observers with very modest equipment. These are called, appropriately enough, the *Galilean moons*. Most telescopes will show the moons as faint star-like objects neatly lined up close to bright Jupiter. Most binoculars will show at least one or two moons orbiting the planet. Small telescopes will show all four of the Galilean moons if they are all visible, but sometimes they can pass behind or in front of Jupiter, or even each other. Telescopes will also show details like Jupiter's cloud bands and, if powerful enough, large storms like its famous Great Red Spot, and the shadows of the Galilean moons passing between the Sun and Jupiter. Sketching the positions of Jupiter's moons during the course of an evening - and night to night – can be a rewarding project! You can download an activity guide from the Astronomical Society of the Pacific at bit.ly/drawjupitermoons

NASA's Juno mission currently orbits Jupiter, one of just nine spacecraft to have visited this awesome world. Juno entered Jupiter's orbit in 2016 to begin its initial mission to study this giant world's mysterious interior. The years have proven Juno's mission a success, with data from the probe revolutionizing our understanding of this gassy world's guts. Juno's mission has since been extended to include the study of its large moons, and since 2021 the plucky probe, increasingly battered by Jupiter's powerful radiation belts, has made close flybys of the icy moons Ganymede and Europa, along with volcanic Io. In 2024 NASA will launch the Europa Clipper mission to study this world and its potential to host life inside its deep subsurface oceans in much more detail. Find the latest discoveries from Juno and NASA's missions at nasa.gov.



Look for Jupiter as it forms one of the points of a celestial triangle, along with Venus and a very thin crescent Moon, the evening of February 22, 2023. This trio consists of the brightest objects in the sky – until the Sun rises! Binoculars may help you spot Jupiter’s moons as small bright star-like objects on either side of the planet. A small telescope will show them easily, along with Jupiter’s famed cloud bands. How many can you count? Keep watching Jupiter and Venus as the two planets will continue to get closer together each night until they form a close conjunction the night of March 1. Image created with assistance from Stellarium.

2023 Star Party Schedule

(New format thanks to Eric)

Date	Arrival Time	Civil Dusk
Jan 20 2023	5:00 PM	17:25 EST
Feb 17 2023	5:30 PM	17:59 EST
Mar 17 2023	7:00 PM	19:31 EDT
Apr 21 2023	7:30 PM	20:12 EDT
May 19 2023	8:00 PM	20:45 EDT
Jun 16 2023	8:30 PM	21:07 EDT
Jul 14 2023	8:30 PM	21:02 EDT
Aug 11 2023	8:00 PM	20:31 EDT
Sep 15 2023	7:00 PM	19:32 EDT



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 Taghanic 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.