



## October, 2023

**Website:** [www.midhudsonastro.org](http://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](https://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 October 17<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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### October Speaker

#### Student Summer Research Reports: Metallicity Proxies and Cosmic Strings

SUNY New Paltz students Phoebe Heretz and Claire O'Connor will describe the research they worked on this summer. Claire remained in New Paltz over the summer, while Phoebe worked at the Harvard/Smithsonian Center for Astrophysics (CfA) in Cambridge, MA.

Online link to the MHAA monthly Business Meeting Agenda:

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



## **Minutes of the monthly meeting of the Mid Hudson Astronomical Association, September 19, 2023**

The meeting was called to order at 7:31 PM by Vice President Dave Sherman in the Coykendall Auditorium at SUNY New Paltz, NY, and on the online application Zoom.

The minutes of the August meeting (by Tim Denman) as published in the newsletter were unanimously approved.

### **Officer's Reports:**

**President:** Jack Chastain was not present (vacation).

**Vice President:** Dave Sherman was present.

- Chairing this meeting
- No other report

**Recording Secretary:** Jim Rockrohr was present.

- Thank you to Tim Denman for filling in at the August meeting.

**Publicity:** Tim Denman was present.

- Press releases are going out. If you see them tell Tim!
- Remember to ask people you talk to at our events how they heard about us and let Tim know so we can gauge our effectiveness.
- Tim is trying to get our recurring meetings on various public calendars.

### **Upcoming Events:**

- **Innesfree:** Saturday 9/23 see Jack Chastain
- **Opus 40:** Saturday, 9/23, see Rick Versace
- **Mohonk:** Wednesday, 9/27, 9 PM, see Jack
- **Walkway Over the Hudson:** Friday, 9/29 (need coordinator)
- **Stone Mountain Farm, New Paltz:** 9/30, see Jack Chastain
- **Next club star party:** Friday, 10/13
- **Saugerties High School:** date TBD (11/3?), see Jack

**Newsletter:** Rick Versace was not present.

- o (No report)

**Treasurer:** Eric Myers was present.

- See latest newsletter for numbers.

**Outreach:** (need a coordinator)

- o No report

**Speakers:** Alex Passas was present.

- Speakers booked through October.
- Working on November
- December is member talks
- January is "Telescopes 101"

**Membership:** Eric Myers (acting) was present

- Automatic renewal emails quit working in June. Will be fixed soon.
- We have 4 New Paltz student members; yet to renew.
- Guidelines for a youth membership (<18) need to be discussed. Must follow SUNY guidelines.
- Need to vote on youth membership, date TBD.

**Solar System Ambassador:** Willie Yee was not present.

- Osiris Rex Sample return on Sunday, 9/24. Will be on NASA TV.

**Webmaster:** Steve Dittmar was present

- Question about member pages. It can be set to accept member pages.

#### **Old Business:**

- **Last club star party** went well. Clouds cleared about 8 PM.
- **Burger Hill star party:** no one attended from the club.
- **West Point Star party:** only 1 telescope.
- Be sure to ask people how they found us and let Tim know.

#### **New Business and Events:**

- No new business.

#### **Reminders:**

- Paid members get access to club equipment (telescopes, imagers, trackers) and club DVD/VHS video library. See Jack.
  1. Do we have a list of equipment available for loan? Yes, see the website or Jack.
- Paid members can also get access to the club Slack channels. Contact Jack or Eric for access.

#### **Observing Reports:**

- (none reported).

The business meeting was adjourned at 8:01 PM. There were 14 Zoom windows open at the end of the business meeting and approximately 5 people were in the auditorium. **The next meeting is October 17<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.**

The presentation that followed was by Laura Vega, PhD, Goddard Space Flight Center, titled “Stellar Evolution at the Crossroads: Resolving the Nature of RV Tauri Stars”.

Submitted by James Rockrohr, October 14, 2023.

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#### **MHAA Treasurer’s Report for October 2023**

As of 15 October 2023 we have \$4086.57 in our bank account and \$2,633.18 in our PayPal account, with the Treasurer holding \$118 in cash. Our monthly payment of \$16.22 for Google gSuite was paid on the 1st of the month, and our monthly payment of \$15.99 for Zoom was paid on the 15th. This month we paid \$100 for the speaker at our previous meeting, while we received a \$50 donation from someone I assisted with getting familiar with a new scope (they subsequently joined). We received \$150.70 for dues from 4 new members and 2 renewing members.

Respectfully Submitted,  
Eric Myers  
Treasurer

## MHAA Membership Report for October 2023

As of 15 October 2023 the club has 75 paid members in good standing and 10 lapsed memberships, of which 2 are long-time members who have not renewed in over a year. We now have 4 student members and 12 lifetime members. This month we gained 4 new members, with 2 renewals.

The automated script for sending out reminders to members who need to renew their memberships, or will need to in the next month, is now functioning properly again.

Our Slack workspace has 71 “regular” members, which does not include 11 deactivated accounts or 38 invitations sent out but not used. We have over 2451 subscribers to our site on Meetup.com, 1014 US followers for our Facebook page, and 100 followers on Instagram.

Our mailing list on [groups.io](https://groups.io), which is for both members and non-members interested in our activities, has 101 subscribers.

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](https://nightsky.jpl.nasa.gov) to find local clubs, events, and more!



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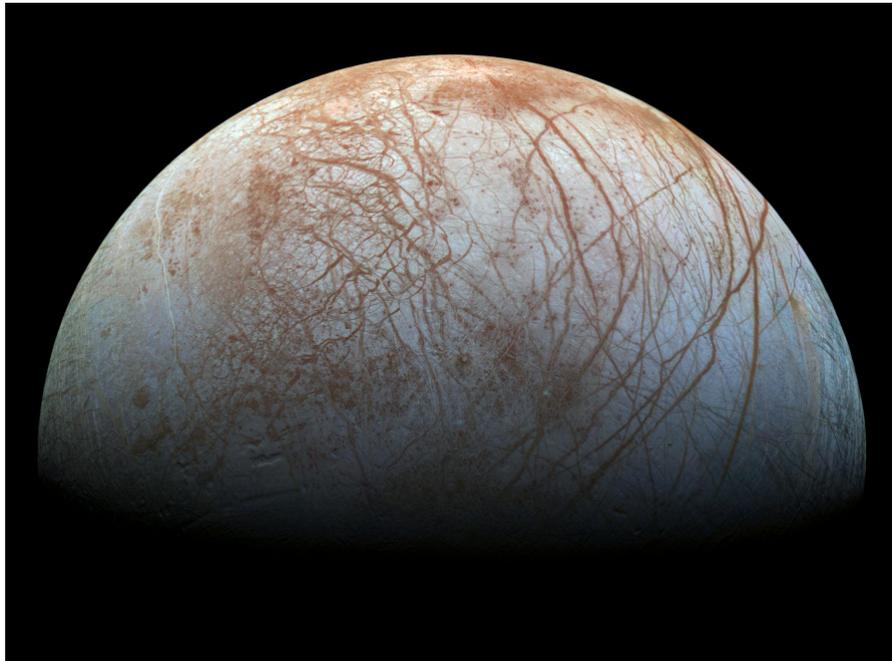
The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit [nightsky.jpl.nasa.gov](https://nightsky.jpl.nasa.gov) to find local clubs, events, and more!

## **From Galileo to Clipper, Exploring Jupiter's Moons**

By Vivian White

**"...We, too, are made of wonders, of great  
and ordinary loves, of small invisible worlds,  
of a need to call out through the dark."**

From **In Praise of Mystery: A Poem for Europa** by Ada Limon



As autumn begins, if you're up late, you may notice a bright point of light rising in the east. Look a bit closer, with a pair of binoculars, and you'll notice it's not a star at all. While stars look point-like no matter how big your backyard telescope, this light appears as a circle under closer examination. Even more curious, you will likely see a line of smaller dots on one or both sides. Congratulations! You've rediscovered the king of the planets - majestic Jupiter - and its four largest moons.

dentalis proxima min. 2. ab hac vero elongabatur oc-

Ori. \* ○ \* \* Occ.

cidentalior altera min: 10. erant præcisè in eadem re-  
cta, & magnitudinis æqualis.

Die quarta hora secunda circa Iouem quatuor sta-  
bant Stellæ, orientales duæ, ac duæ occidentales in

Ori. \* \* ○ \* \* Occ.

eadem ad vnguem recta linea dispositæ, vt in proxi-  
ma figura. Orientalior distabat à sequenti min. 3. hæc  
verò à Ioue aberat min. 0. sec. 40. Iuppiter à proxima  
occidentali min. 4. hæc ab occidentaliori min. 6. ma-  
gnitudine erant ferè æquales, proximior Ioui reliquis  
paulo minor apparebat. Hora autem septima orien-  
tales Stellæ distabant tantum min. 0. sec. 30. Iuppiter

Ori. \*\* ○ \* \* Occ.

ab orientali viciniori aberat min. 2. ab occidentali ve-  
rò sequente min. 4. hæc verò ab occidentaliori dista-  
bat min. 3. erantque æquales omnes, & in eadem recta  
secundum Eclipticam extensa.

Die quinta Cœlum fuit nubilosum.

Die sexta duæ solummodo apparuerunt Stellæ me-

Ori. \* ○ \* Occ.

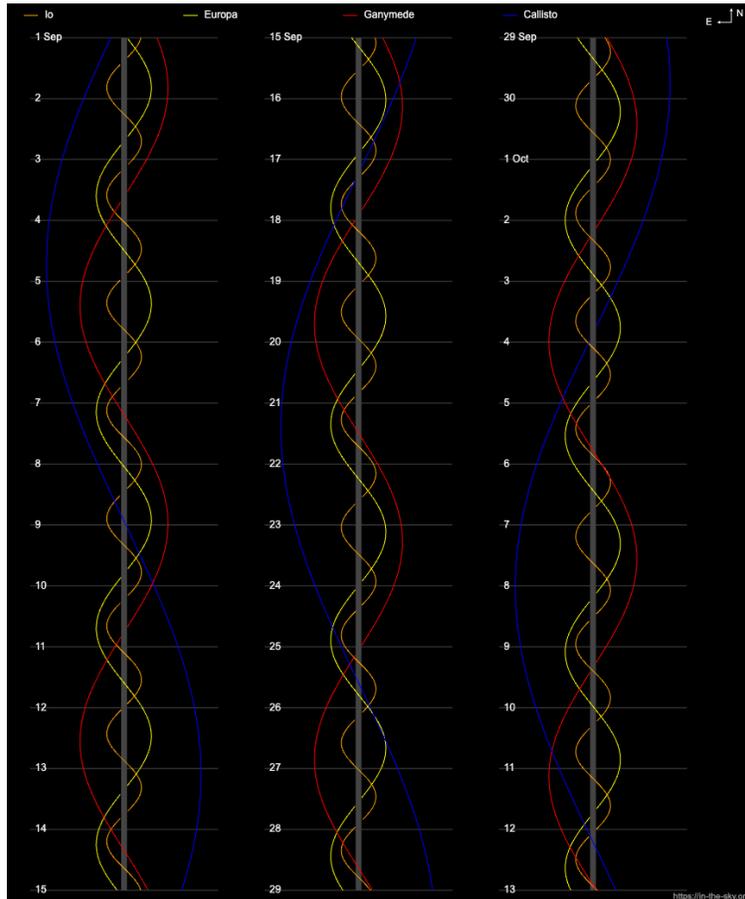
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Galileo's drawings of Jupiter and its Medicean Stars from Sidereus Nuncius. Image courtesy of the History of Science Collections, University of Oklahoma Libraries.

Galileo famously chronicled the four moving dots near Jupiter and surmised that they were orbiting the distant world. While Jupiter has well over 80 discovered moons as of September 2023, these brightest four are called the "Galilean Moons" - Io, Europa, Ganymede, and Callisto. (Great mnemonics exist to remember these in order of distance from Jupiter, such as "I Eat Green Caterpillars") You can follow these like Galileo did, using stargazing apps or the handy image

below. A favorite beginning observing challenge is to [track the movement of the Galilean Moons](#) over the course of many nights. Even within a few hours, you will notice them moving in relation to Jupiter, just as Galileo did.

Fast forward 414 years, and NASA will be sending a robotic mission to investigate the surface of one of these distant worlds. The [Europa Clipper Mission](#) is launching to the cold, icy moon in 2024, to begin orbiting in 2030. With its salty oceans covered by ice, Europa was chosen as an excellent location to continue the search for life outside of Earth. Clipper will be the largest spacecraft ever sent to another planet, designed to withstand Jupiter's punishing radiation. Once it arrives at Jupiter in 2030, NASA plans to do about 50 flybys of Europa, mapping almost the entire surface of this watery world.



The position of the Galilean Moons of Jupiter in October 2023: <https://in-the-sky.org/jupiter.php>

What was once only dreamed of in the small telescope of Galileo, or in great works of fiction, NASA is turning our wildest imagination into reality. One of the celebrated quotes from the classic 2010: *Odyssey Two* warns, "All these worlds are yours, except Europa. Attempt no landing there." Science fiction fans can feel relieved knowing that writer Arthur C. Clarke gave his blessing for the Europa Clipper mission.

Join the Europa Message in a Bottle Campaign to send your name with the spacecraft, hear the rest of the poem by the US Poet Laureate, and learn more about the wonders of space travel with the Clipper Mission: <https://europa.nasa.gov/participate>

Watch a wonderful Clipper webinar with Dr. Cynthia Phillips, planetary geologist with the mission: <https://www.youtube.com/live/RnnLJBLRBCA?feature=shared&t=269>

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## Star Party Schedule

| Date        | Arrival Time | Civil Dusk |
|-------------|--------------|------------|
| Oct 13 2023 | 6:00 PM      | 18:44 EDT  |
| Nov 10 2023 | 4:30 PM      | 17:07 EST  |
| Dec 8 2023  | 4:30 PM      | 16:54 EST  |
| Jan 5 2024  | 4:30 PM      | 17:09 EST  |
| Feb 9 2024  | 5:00 PM      | 17:49 EST  |
| Mar 8 2024  | 6:00 PM      | 18:22 EST  |
| Apr 5 2024  | 7:30 PM      | 19:54 EDT  |
| May 3 2024  | 8:00 PM      | 20:28 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 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](http://www.midhudsonastro.org).