



**April, 2023**

**Website:** [www.midhudsonastro.org](http://www.midhudsonastro.org)

**groups.io Group:** [mhaa.groups.io](https://groups.io/g/mhaa)

**President :** Jack Chastain

**Secretary:** Jim Rockrohr

**Newsletter Editor:** Rick Versace

**Publicity:** Tim Denman

**Speakers:** Alexandra Passas

**Vice President:** Dave Sherman

**Treasurer:** Eric Myers

**Membership Coordinator:** Eric Myers

**Webmaster:** Steve Dittmar

**Outreach:** Joe Macagne

**College Liaison:** Dr. Amy Bartholomew

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



The next meeting is April 18<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.



### **April Speaker**

**"I Think I'll Stay Here"**

Thomas Evangelist , Brooklyn educator

Evangelist will take a tour of the solar system and look at why Earth is ideal for life as we know it and why the other planets are not. He is going to do it almost entirely from a chemist's point of view. Audiences in grades K-12 as well as adults should find him entertaining and informative.



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,  
March 21, 2023**

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

The minutes of the February meeting as published in the newsletter were unanimously approved.

**Officer's Reports:**

**President:** Jack Chastain was present.

- (Nothing to report)

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

- 2 local libraries are looking for star parties;
  - o Pine Plains – 4/22
  - o Millerton – 4/28
  - o No rain dates, use indoor presentation.

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

- (Nothing to report)

**Publicity:** Tim Denman was present.

- Press releases are going out. If you see them tell Tim!
- Having problems with online calendars

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

- o (No report)

**Treasurer:** Eric Myers was present.

- Eric presented the proposed budget for 2023 as required by the By-Laws. See the February newsletter for the details he presented.
  - o After some discussion the Budget was moved, seconded and passed with no objections.

**Outreach:** (need a coordinator)

- o (No report)

**Speakers:** Alex Passas was present on zoom.

- Programs booked through May.
- Others in the works.

**Membership:** Eric Myers was present

- Nothing to report

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

- (No report)

**Webmaster:** Steve Dittmar was present

- Nothing to report.

#### Old Business:

- The last **club star party** was cancelled due to weather.
- If you meet someone at one of our events be sure to ask them how they heard about us and let Tim know.
- We are looking to assist the **Poughkeepsie Discovery Museum** with their StarLab. See Eric to help.

#### New Business:

- Encourage people to join us on **MeetUp** to get notices of events and changes due to weather, etc.
- **Ulster County Savings Bank** is sponsoring a poll to award \$2500 grants to educational non profits. Vote online once each day for 12 days beginning 3/27. See their website or contact Alex Passas for details.

#### Events:

- **Audubon Club:** Tim Denman – no new news.
- **Mohonk Mountain House:** Jack Chastain – Thursday event cancelled due to weather.
- **Wedding:** 4/10, Jack Chastain – Full Moon Resort in Big Indian. Need help.
- **Sam's Point:** Tim Denman – still working on it.
- **Next Club Star Party** – March 21<sup>st</sup>, Lake Taghkanic State Park.

#### Reminders:

- Paid members get access to club equipment (telescopes, imagers, trackers) and club DVD/VHS video library. See 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 8:00 PM. There were 13 Zoom windows open at the end of the business meeting and approximately 12 people were in the Coykendall Auditorium. **The next meeting is April 18<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 Steve Bellavia, Assistant Adjunct Professor at Suffolk County Community College and Principle Engineer for the Vera Rubin Space Telescope camera. His talk was titled "The Invisible Universe".

Submitted by James Rockrohr, April 14, 2023.

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### **MHAA Treasurer's Report for April 2023**

As of 17 April 2023 we have \$3,675.61 in our bank account and \$2,347.11 in our PayPal account, with the Treasurer holding \$40 as petty cash. Since the last meeting we took in \$100.26 in dues for 1 new member and 3 renewals. 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 awarded \$150 in Barnes & Noble gift cards to students who participated in the 64nd Annual Dutchess County Regional Science Fair, held at Dutchess Community College on March 25th. Club member Robert Bolitho also donated a \$30 gift card, which allowed us to award an additional prize.

This month we paid \$331.50 to Chronogram for an advertisement in Chronogram Explore, which is a brochure about local attractions and businesses that is distributed to tourists (and everyone else) during the summer. This includes also being listed in the online version of Chronogram Explore.

Last week we received donations totally \$519 after several of our members took telescopes to a wedding at the Full Moon Resort, in Big Indian, NY.

This month I filed form 990N with the IRS to maintain our tax exempt status as a 501(c)(3) organization. Although we do not have a formal Letter of Determination from the IRS on our status, filing this form declares that our gross receipts are under \$50,000 and we continue to satisfy the published requirements for tax exemption.

I will be filing form CHAR500 with New York State soon, hopefully by the end of the month, though we have 6 months past the end of our fiscal year to do so. In the past I've always been able to fill out a simple paper form, but this year online filing is required, and I have set up an account on the site to do that.

Respectfully Submitted,  
Eric Myers  
Treasurer

## MHAA Membership Report for April 2023

As of 16 April 2023 the club has 69 paid members in good standing and 10 lapsed memberships, of which 2 expired over a year ago. We have 3 student members and 12 lifetime members. This month we had 3 membership renewals and gained 1 new member. Our Slack workspace has 61 "regular" members, which does not include 16 deactivated accounts or 45 invitations sent out but not used. We have 253 "members" who have subscribed to our site on Meetup.com

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!

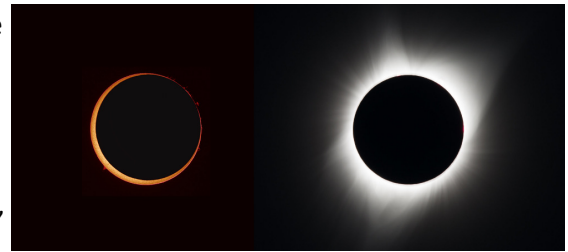
## Solar Eclipses Are Coming!

David Prosper

Have you ever witnessed a total solar eclipse? What about an annular solar eclipse? If not, then you are in luck if you live in North America: the next twelve months will see two solar eclipses darken the skies for observers in the continental United States, Mexico, and Canada!

Solar eclipse fans get a chance to witness an annular eclipse this fall. On Saturday, October 14, 2023, the Moon will move exactly in front of the Sun from the point of view of observers along a narrow strip of land stretching across the United States from Oregon to Texas and continuing on to Central and South America. Since the Moon will be at its furthest point in its orbit from Earth at that time (known as apogee), it won't completely block the Sun; instead, a dramatic "ring" effect will be seen as the bright edge of the Sun will be visible around the black silhouette of the Moon. The distinct appearance of this style of eclipse is why it's called an annular eclipse, as annular means ring-like. If you are standing under a tree or behind a screen you will see thousands of ring-like shadows projected everywhere during maximum eclipse, and the light may take on a wan note, but it won't actually get dark outside; it will be similar to the brightness of a cloudy day. This eclipse must only be observed with properly certified eclipse glasses, or other safe observation methods like pinhole projection or shielded solar telescopes. Even during the peak of the eclipse, the tiny bit of the Sun seen via the "ring" can damage your retinas and even blind you.

Just six months later, a dramatic total solar eclipse will darken the skies from Mexico to northeast Canada, casting its shadow across the USA in a strip approximately 124 miles (200 km) wide, on Monday, April 8, 2024. While protection must be worn to safely observe most of this eclipse, it's not needed to witness totality itself, the brief amount of time when the Moon blocks the entire surface of the Sun from view. And if you try to view totality through your eclipse viewer, you won't actually be able to see anything! The Moon's shadow will dramatically darken the skies into something resembling early evening, confusing animals and delighting human observers. You will even be able to see bright stars and planets - provided you are able to take your eyes off the majesty of the total eclipse! While the darkness and accompanying chilly breeze will be a thrill, the most spectacular observation of all will be the Sun's magnificent corona! Totality is the only time you can observe the corona, which is actually the beautiful outer fringes of the Sun's atmosphere. For observers in the middle of the path, they will get to experience the deepest portion of the eclipse, which will last over four minutes - twice as long as 2017's total solar eclipse over North America.



Photos of an annular total solar eclipse (left) and a total solar eclipse (right). Note that the annular eclipse is shown with a dark background, as it is only safe to view with protection – you can see how a small portion of the Sun is still visible as the ring around the Moon. On the right, you can see the Sun's wispy corona, visible only during totality itself, when the Moon completely – or totally - hides the Sun from view. A total solar eclipse is only safe to view without protection during totality itself; it is absolutely necessary to protect your eyes throughout the rest of the eclipse! Credits: Left, Annular Eclipse: Stefan Seip (Oct 3, 2005). Right, Total Eclipse, NASA/Aubrey Gemignani (August 21, 2017)

While some folks may be lucky enough to witness both eclipses in full – especially the residents of San Antonio, Texas, whose city lies at the crossroads of both paths – everyone off the paths of maximum eclipse can still catch sight of beautiful partial eclipses if the skies are clear. The Eclipse Ambassadors program is recruiting volunteers across the USA to prepare communities off the central paths in advance of this amazing cosmic ballet. Find more information and apply to share the excitement at [eclipseambassadors.org](http://eclipseambassadors.org). NASA has published a fantastic Solar Eclipse Safety Guide which can help you plan your viewing at [bit.ly/nasaclipsesafety](http://bit.ly/nasaclipsesafety). And you can find a large collection of solar eclipse resources, activities, visualizations, photos, and more from NASA at [solarsystem.nasa.gov/eclipses](http://solarsystem.nasa.gov/eclipses)



This detailed solar eclipse map shows the paths of where and when the Moon's shadow will cross the USA for the upcoming 2023 annular solar eclipse and 2024 total solar eclipse, made using data compiled from multiple NASA missions. Where will you be? This map is very detailed, so if you would like to download a larger copy of the image, you can do so and find out more about its features at: <https://svs.gsfc.nasa.gov/5073> Credits: NASA/Scientific Visualization Studio/Michala Garrison; eclipse calculations by Ernie Wright, NASA Goddard Space Flight Center.

## 2023 Star Party Schedule

Date	Arrival Time	Civil Dusk
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
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



### 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).