



September, 2023

Website: 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 September 19th, 2023, on Zoom and in person. Check MeetUp for details and link. Zoom link will be sent to all those that RSVP.



September Speaker

Exploring RV Tauri Stars: A Study of DF Cygni and U Monocerotis

Dr. Laura Vega

Dr. Vega will cover her dissertation work that focused on a subclass of luminous pulsating supergiant stars nearing the end of their life. These stars exhibit interesting photometric behaviors influenced by the presence of stellar companions which form binary systems within large circum-binary dusty disks.



Online link to the MHAA monthly Business Meeting Agenda:

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



MINUTES OF THE AUGUST 15 MEETING OF THE MHAA

The meeting began at 7:30 and the minutes of the July meeting were passed after a motion for acceptance was made and seconded.

OFFICER REPORTS:

PRESIDENT

Jack Chastain again requested assistance in scheduling and administering outreach. Rick, Eric, and Dave have helped so far but we still need more, especially from anyone near a scheduled event. Those finding outreach events do not need to be the contact person. Eric suggested that we could have an outreach chairperson who could involve others to be the local contact for each event.

VICE PRESIDENT

Dave Sherman mentioned that we have upcoming events at Gardiner and West Point.

RECORDING SECRETARY

Jim Rockrohr was not present.

NEWSLETTER CHAIRPERSON

Rick Versace not present.

PUBLICITY DIRECTOR

Tim Denman mentioned that our press releases go out to 15 news outlets plus groups.io and that Steve promotes our events on our Facebook site. (Alex posts to our MeetUp site.)

TREASURER

Eric Myers mentioned that his report is in the newsletter. In addition, our treasury only had to contribute \$12 for the picnic. Jack and Scott were reimbursed for their expenses in obtaining the picnic food and beverages There is some petty cash on hand for immediate expenses.

NON-OFFICER REPORTS:

OUTREACH

Willie Yee helps fill in for the outreach vacancy but he is on Red Cross duty in Maui.

SPEAKERS

Alex reported that we have a September speaker scheduled and that she has ideas for scheduling future speakers. She was recovering from Covid so Tim introduced this month's speaker.

SOLAR SYSTEM AMBASSADOR

As stated above Willie could not be present.

MEMBERSHIP

Position vacant. Eric Myers reported that there are no major changes with the exception of one new member as soon as that person's check arrives. Also, the membership list needs to be updated with our new website. Current members may be getting renewal reminders but may already be up to date with their fees. Steve and Rick are assisting. Andrew asked if we are recruiting new student members and outreach at local schools. Eric stated that there may be upcoming outreach with a West Point group at their garrison.

WEB MANAGER

Steve Dittmar is still working on the new website. He will coordinate with Rick to insure that the star party dates are congruent with our new scheduling procedure.

OLD BUSINESS:

Scott reported that the picnic went well - good food and weather but would like a larger turnout next year.

Jack requested that someone take charge of the post-holiday dinner this winter.

Jack reported on the West Hurley Library event. One family showed up early for general training but no one showed up later with any telescopes so he and Steve left early. We received a \$50 gift card for Barnes and Noble. Steve suggested that we use it as a science fair award.

Jack, Steve, Dave, and Eric were at the August star party. The event went well and the Starlink chain was seen twice and so was the ISS. Persids were also seen. After midnight they caught a few hours of sleep and, after coffee, headed to the Innessfree Gardens for their Perseid observation event. They set up at 4 different locations and spectators were treated to views of the moon and Jupiter and also claimed they had seen a few Perseids.

NEW BUSINESS:

Aust 19 observing at the Gardiner Park in Gardiner. The location was a good one albeit the mosquitos since it was near the Wallkill River. Jack reported on this.

Walkway at Night on the 18th, weather permitting.

August 31 event possible at the Winnikee Land Trust at Burger Hill. Dave Lindeman and Robert The to be approached about this.

September 30 mycology group wants us to participate in their festival near New Paltz. They are offering a \$100 donation to the MHAA.

Probably a December event at Saugerties as well as others after September. There was no time left to discuss these however.

Alex wanted to know if we are renewing our ad in the Chronogram but due to time restraint we will be discussing this online.

The meeting ended on time so that our speaker, award-winning astrophotographer Alan Friedman, could make his excellent online program about solar photography.

Respectfully submitted by Tim Denman

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

As of 17 September 2023 we have \$4186.22 in our bank account and \$2,514.69 in our PayPal account, with the Treasurer holding \$68 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 received \$50.22 for two new memberships, and \$25 from donations collected at an event in Gardiner.

Respectfully Submitted,  
Eric Myers  
Treasurer

## MHAA Membership Report for September 2023

As of 17 September 2023 the club has 73 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 2 new members, with no renewals.

The code which was automatically sending out renewal notices has failed to run for the past few weeks, or maybe months. I only just discovered this today. I made a quick correction to the error that caused this and ran the script, so some folks may have recently received a notice. Better late than never. I anticipate making a better change to the code when I get a chance.

Our free student memberships have been set to expire on Sept. 1st, giving graduating students membership over the summer. All 4 of our students are eligible to renew (they have not graduated) and I will confirm with them that they wish to continue their memberships.

Our Slack workspace has 65 “regular” members, which does not include 29 deactivated accounts or 36 invitations sent out but not used. We have over 2440 subscribers to our site on Meetup.com, 1096 followers for our Facebook page, and 95 followers on Instagram.

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!

Looking Beyond the Stars Brian Kruse

Looking up in awe at the night sky, the stars and planets pop out as bright points against a dark background. All of the stars that we see are nearby, within our own Milky Way Galaxy. And while the amount of stars visible from a dark sky location seems immense, the actual number is measurable only in the thousands. But what lies between the stars and why can't we see it? Both the Hubble telescope and the James Webb Space Telescope (Webb) have revealed that what appears as a dark background, even in our backyard telescopes, is populated with as many galaxies as there are stars in the Milky Way.

So, why is the night sky dark and not blazing with the light of all those distant galaxies? Much like looking into a dense forest where every line of sight has a tree, every direction we look in the sky has billions of stars with no vacant spots. Many philosophers and astronomers have considered this paradox. However, it has taken the name of Heinrich Wilhelm Olbers, an early 19th century German astronomer. Basically, Olbers Paradox asks why the night sky is dark if the Universe is infinitely old and static – there should be stars everywhere. The observable phenomenon of a dark sky leads us directly into the debate about the very nature of the Universe – is it eternal and static, or is it dynamic and evolving?

It was not until the 1960s with the discovery of the Cosmic Microwave Background that the debate was finally settled, though various lines of

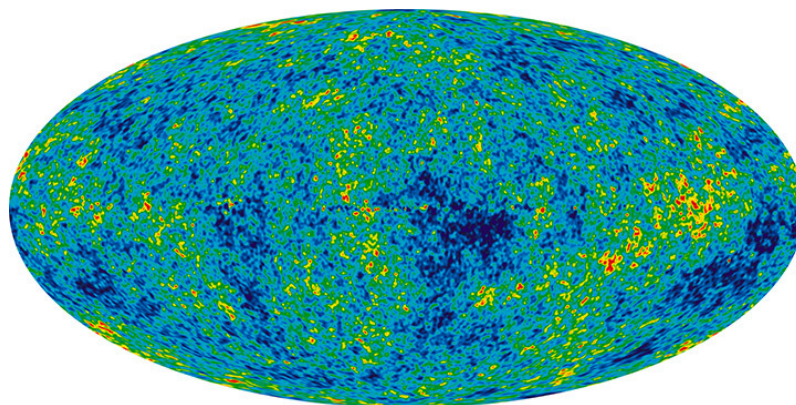


NASA's James Webb Space Telescope has produced the deepest and sharpest infrared image of the distant universe to date. Known as Webb's First Deep Field, this image of galaxy cluster SMACS 0723 is overflowing with detail. This slice of the vast universe is approximately the size of a grain of sand held at arm's length by someone on the ground. (Image Credit: NASA, ESA, CSA, STScI) <https://bit.ly/webbdeep>

evidence for an evolving universe had built up over the previous half century. The equations of Einstein’s General Theory of Relativity suggested a dynamic universe, not eternal and unchanging as previously thought. Edwin Hubble used the cosmic distance ladder discovered by Henrietta Swan Leavitt to show that distant galaxies are moving away from us – and the greater the distance, the faster they’re moving away. Along with other evidence, this led to the recognition of an evolving Universe.

The paradox has since been resolved, now that we understand that the Universe has a finite age and size, with the speed of light having a definite value. Here’s what’s happening – due to the expansion of the Universe, the light from the oldest, most distant galaxies is shifted towards the longer wavelengths of the electromagnetic spectrum. So the farther an object is from us, the redder it appears. The Webb telescope is designed to detect light from distant objects in infrared light, beyond the visible spectrum. Other telescopes detect light at still longer wavelengths, where it is stretched into the radio and microwave portions of the spectrum. The farther back we look, the more things are shifted out of the visible, past the infrared, and all the way into the microwave wavelengths. If our eyes could see microwaves, we would behold a sky blazing with the light of the hot, young Universe – the Cosmic Microwave Background.

The next time you look up at the stars at night, turn your attention to the darkness between the stars, and ponder how you are seeing the result of a dynamic, evolving Universe.



The oldest light in the universe, called the cosmic microwave background, as observed by the Planck space telescope is shown in the oval sky map. An artist's concept of Planck is next to the map. The cosmic microwave background was imprinted on the sky when the universe was just 380,000 years old. It shows tiny temperature fluctuations that correspond to regions of slightly different densities, representing the seeds of all future structure: the stars and galaxies of today. (Image credit: ESA and the Planck Collaboration - D. Ducros) <https://go.nasa.gov/3qC4G5q>



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.