



Mid-Hudson Astronomical Association

January, 2016

Website: www.midhudsonastro.org

Yahoo Group: MHAstro

President : Willie Yee
Secretary: Jim Rockrohr
Newsletter Editor: Rick Versace
Publicity: Paul Chauvet
Parks Liaison:

Vice President: Candace Wall
Treasurer: OPEN (Ken Bailey until June)
Membership Coordinator: OPEN
Webmaster: Paul Chauvet
College Liaison: Dr. Amy Forestell

Directors: Karl Loatman, Joe McCagne, Steve Carey, Paul Granich

Minutes of the monthly meeting of the Mid Hudson Astronomical Association, December 15, 2015

The meeting was called to order at 7:32 PM by President Willie Yee in the Auditorium of the Coykendall Science Center at SUNY, New Paltz, NY.

The minutes of the last meeting were approved as published in the most recent newsletter.

Officer's Reports:

Membership: Caryn Sobel was not present. (REMINDER: Dues are due!)

Treasurer: Ken Bailey was present, but see his latest report as published in the newsletter.

Treasurer's Report for the month of December, 2015

Date: 12 January, 2016

Bank Balance:	\$2037.47
Outstanding Checks:	\$ 0
Outstanding Deposits:	\$ 539.70
Ending Bank Balance:	\$2577.17
Checkbook Balance:	\$2577.17
Balance with Bank:	Yes

Ending balance total: \$2577.17

Notes: Outstanding deposits are a \$71.91 and a \$167.79 deposit for membership dues from PayPal, a check from Mohonk Preserve for a program and a check from Rockland Astronomy Club for a lecture.

Respectfully submitted: Ken Bailey
Treasurer

Outreach: Candace Wall was not present but the following were discussed:

- **James Evans Elementary School** (Wappingers Falls): Looking for a brief presentation and outdoor star gazing in April/May for 6-12 year olds on a Thursday or Friday.
- **Montessori Schools** (New Paltz?): Looking for a regular (monthly?) presentation.
- **Stone Ridge Public Academic Fair:** Saturday, April 2, requesting a S.T.E.A.M. Focused (Science, Technology, Engineering, Arts, and Mathematics) presentation.
- **Fishkill Plains Elementary School:** Looking for a presentation and star gazing on a Wednesday or Thursday in March, April, or May.
- **Girl Scouts Camporee at Ulster County Fairgrounds:** June 11. Looking for an activity for the girls during the day and star gazing for those who stay overnight.
- **Sam's Point:** Looking for a day time solar weekend day event in early spring.
- **Olana:** Willie working on setting dates for this year

Publicity: Paul Chauvet was present. Send him info on public events.

Webmaster: Paul Chauvet present. No issues known.

Upcoming programs: Candace Wall was not present but the following information was shared:

- January – Ed Popko: "Celestial Navigation – Finding Your Way with the Stars"
- February – (TBD)
- March – Willie Yee on Exoplanets
- April – Tarun Biswas
- May – (TBD)
- June – Steve Bellevia

Old Business:

- **Election of Officers for 2016:** The following slate was presented to the membership for a vote:
 - President: Willie Yee
 - Vice President: Candace Wall
 - Publicity: Paul Chauvet
 - Web Master: Paul Chauvet
 - Secretary: Jim Rockrohr
 - Treasurer: OPEN (although Ken Bailey will continue for a few more months).
 - Newsletter Editor: Rick Versace

- Director: Karl Loatmann
- Director: Joe Macagne
- Director: Steve Carey
- Director: Paul Granich

It was moved, seconded, and passed unanimously.

- **Club Telescopes:**

- 13" Dobsonian in use (Jack Chastain). Mirror removed. Working on collecting more info and prices.
- Criterion 8" SCT is available. Tabletop use (no tripod). See Willie.
- ETX 125 has a focuser issue. Jo Macagne will fix it with a JMI remote focuser add-on.
- 4" with Paul Chauvet.
- 8" Newtonian on an equatorial mount with Karl Loatmann.

We agreed to donate an ETX 125 to a new club. However, it has been determined that we don't own a 2nd ETX 125. (A scope owned by SUNY New Paltz was thought to be ours.) Therefore, after discussion, it was moved and seconded that we donate the 8" Newtonian that is now with Karl Loatman instead. The motion passed and Ken Bailey will deliver the 'scope later this year.

New Business:

- **NEAF Booth:** We have been offered a table for half price (\$150) at this year's NEAF (April 9-10) to promote our club. We need volunteers to man it. Those volunteers will get free admission to the show on that day. It was moved, seconded, and passed that we take this table. Steve Carey, Willie Yee, Jo Macagne, and Jack Chastain have volunteered, so far.
- **Request:** Willie is looking for 0.965" eyepieces for his finder scope.
- **Annual Dinner:** Need a coordinator: Joe Macagne and Willie volunteered. It will be at The Would restaurant in Highland on Friday, ~~January 29~~, (since changed to January 22).
- **Annual Shopping Trip to High Point Scientific:** This will be held on Saturday, January 9 (snow day January 16) at 10 AM at the High Point Store. We'll go to lunch afterwards.

Observing Reports:

- (None mentioned)

Visitors/New Members:

There was a total of about 13 people in attendance.

The meeting was adjourned at 7:59 PM. Next meeting is on January 19th. The program that followed was a set of short presentations by members followed by cookies and conversation:

- Jack Chastain: Status of the Club's 13" Dobsonian.
- Karl Loatman: "Stellarium and Me"
- Willie Yee: Highlights of the Bash Symposium at the University of Texas
- Paul Chauvet: "Water in our Solar System"

Submitted by James Rockrohr, January 17, 2016.

From the President:

Treasurer needed

As most of you know, Ken Bailey who has served as our treasurer the past few years will be moving to warmer climes sometime this year. We are in need of a new treasurer, and the sooner the better so that Ken can mentor the new person into the job, and arrange to have signatures transferred, etc.

Please contact Ken <fleetwizard01@yahoo.com> if you would be willing to serve the club in this capacity.

2017 Eclipse offer

There is a total solar eclipse in August 2017. Lodging has already been sold out for years along the path of totality.

Bob Berman will be leading a tour to Casper WY, and has made this offer:

This tour is filling up, but we'd love to have you and members of the MHAA.

We've done 7 totalities, and seen all 7. This is partly luck, of course, but also we plan carefully and ONLY go to locations with high probabilities of success. That's why we skipped the totalities of 2015 and 2016 -- we don't want sad faces.

Right now, I can offer MHAA members a \$125 discount apiece if you can get a bunch to sign up all at once. In another few months, when the tour gets over 50% full, she won't offer that any more.

Contact Bob at Skymanbob@aol.com if interested.

To the Moon II

"I have some other great moon books, which I will discuss" . . . now.

First, the foremost atlas of the moon, strangely titled *Atlas of the Moon*, by Antonin Rukl. This is a classic, and long out of print. Fortunately there is a reprint, with expanded text and maps. I was fortunate enough to find the original from a used book site. (By the way many classic astronomy books can be found on these sites, such as ABE booksellers, and usually at lower prices than at astronomy marketplaces.) This is a true atlas, with little history or geology. There are 76 maps of areas of the moon that are hand drawn (air-brushed?). They thus represent a subjective view of what one can actually see through the telescope. The accuracy and beauty of these maps made this the premier atlas until the era of orbital photography maps, and even now many prefer it to the photographic ones. There is a small amount of supplementary material including 50 earth-based photos of areas of the moon, and index maps on the flyleaves. The only downside of this atlas is that if one owns an original in great condition, it is too nice to take out to the field and risk having it damaged by the elements or rough handling.



The Modern Moon: A Personal View by Charles A. Wood is a modern classic. This book is unique in combining a historical and observational tour of the moon. Chapters of the book are dedicated to large areas of the moon that are both described in detail and explored for what they tell us about the history of the moon. This is a great introduction to the geology and history of the moon, full of detail, and linked to what one can observe. It is profusely illustrated, and very readable. It is ridiculously priced (\$243 new on Amazon, \$129 used; higher elsewhere), but cheaper prices can be found if one is persistent in the search. Or get it from the library. It is worth reading twice, but not essential for the observer.

Atlas of the Lunar Terminator by John E. Westfall is a photographic atlas with all the main photos of the moon taken, as the title suggests along the terminator. It covers the moon throughout its 28 day cycle, so each area is covered twice, with the sun on opposite sides. It is a useful guide for what objects on the moon will actually look like when seen near the terminator, which give the highest contrast views. I find it a little difficult to navigate as it is all organized by lunar colongitude. It would be nice if these had been listed or correlated by lunar day, so one could use it to plan observing in advance. This is a worthy supplemental book.

Observing the Moon: the modern astronomer's guide by Gerald North is a comprehensive how-to guide on observing the moon. It covers telescopes, sketching, photography and books. It summarized the the geology and the history of the exploration of the moon, and has detailed descriptions with photographs of some 50+ objects. Also not seen in most other books is a discussion of Transient Lunar Phenomena, those brief outbursts of light that are

occasionally seen on the surface of the moon. This is the most comprehensive of the books I have discussed, and as a result it overlaps a lot of the others. If one is starting out and wants details on the actual act of observing, it is a good place to start.

Links:

Atlas of the Moon

<http://www.amazon.com/Atlas-Moon-Revised-Updated-Edition/dp/1931559074>

The Modern Moon

<http://www.amazon.com/The-Modern-Moon-Personal-View/dp/0933346999>

Atlas of the Lunar Terminator

<http://www.barnesandnoble.com/w/atlas-of-the-lunar-terminator-john-e-westfall/1003852395?ean=9780521590020>

Observing the Moon

<http://www.barnesandnoble.com/w/observing-the-moon-gerald-north/1100958946>

Dr. Willie Yee
MHAA President



Visit spaceplace.nasa.gov to explore space and earth science!

The Loneliest Galaxy In The Universe By Ethan Siegel

Our greatest, largest-scale surveys of the universe have given us an unprecedented view of cosmic structure extending for tens of billions of light years. With the combined effects of normal matter, dark matter, dark energy, neutrinos and radiation all affecting how matter clumps, collapses and separates over time, the great cosmic web we see is in tremendous agreement with our best theories: the Big Bang and General Relativity. Yet this understanding was only possible because of the pioneering work of Edwin Hubble, who identified a large number of galaxies outside of our own, correctly measured their distance (following the work of Vesto Slipher's work measuring their redshifts), and discovered the expanding universe.

But what if the Milky Way weren't located in one of the "strands" of the great cosmic web, where galaxies are plentiful and ubiquitous in many different directions? What if, instead, we were located in one of the great "voids" separating the vast majority of galaxies? It would've taken telescopes and imaging technology far more advanced than Hubble had at his disposal to even detect a single galaxy beyond our own, much less dozens, hundreds or millions, like we have today. While the nearest galaxies to us are only a few million light years distant, there are voids so large that a galaxy located at the center of one might not see another for a hundred times that distance.

While we've readily learned about our place in the universe from observing what's around us, not everyone is as fortunate. In particular, the galaxy MCG+01-02-015 has not a single known galaxy around it for a hundred million light years in all directions. Were you to draw a sphere around the Milky Way with a radius of 100 million light years, we'd find hundreds of thousands of galaxies. But not MCG+01-02-015; it's the loneliest galaxy ever discovered. Our Milky

Way, like most galaxies, has been built up by mergers and accretions of many other galaxies over billions of years, having acquired stars and gas from a slew of our former neighbors. But an isolated galaxy like this one has only the matter it was born with to call its own.



Edwin Hubble made his universe-changing discovery using telescope technology from 1917, yet he would have found absolutely zero other galaxies at all were we situated at MCG+01-02-015's location. The first visible galaxy wouldn't have shown up until we had 1960s-level technology, and who knows if we'd have continued looking? If we were such a lonely galaxy, would we have

given up the search, and concluded that our galaxy encompassed all of existence? Or would we have continued peering deeper into the void, eventually discovering our unusual location in a vast, expanding universe? For the inhabitants of the loneliest galaxy, we can only hope that they didn't give up the search, and discovered the entire universe.

2016 Star Party Schedule

Date	Time	Sunset	End Civil Twilight	Nearest New Moon
January 8th	7:30 PM	4:42 PM	5:13 PM	January 9th
February 5th	7:30 PM	5:16 PM	5:45 PM	February 8th
March 11th	7:30 PM	5:59 PM	6:26 PM	March 8th
April 8th	8:00 PM	7:30 PM	7:58 PM	April 7th
May 6th	8:30 PM	8:01 PM	8:32 PM	May 6th
June 10th	8:30 PM	8:31 PM	9:05 PM	June 4th
July 1st	8:30 PM	8:35 PM	9:09 PM	July 4th
July 29th	8:30 PM	8:17 PM	8:49 PM	August 2nd
September 2nd	8:00 PM	7:27 PM	7:56 PM	September 1st
September 30th	7:30 PM	6:38 PM	7:06 PM	September 30th
October 28th	7:30 PM	5:55 PM	6:23 PM	October 30th
November 25th	7:30 PM	4:28 PM	4:59 PM	November 29th
December 30th	7:30 PM	4:34 PM	5:06 PM	December 29th

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:

- ♦ For the foreseeable future, all indoor meetings will be held on the 3rd Tuesday of each month in Coykendall Science Bldg., SUNY New Paltz (directions above) at 7:30 PM. All indoor events are FREE! All are welcome. The presentations are generally geared towards teenagers and up. For more information, call the Club Hotline.
- ♦ 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.