



Mid-Hudson Astronomical Association

June, 2014

Website: www.midhudsonastro.org

Yahoo Group: MHAstro

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

Vice President: Joe Macagne
Treasurer: Ken Bailey
Membership Coordinator: Caryn Sobel
Webmaster: Paul Chauvet
College Liaison: Dr. Amy Forestell

Directors: Steve Carey, Dave Lindemann, Karl Loatman, & Tom Rankin

Meeting Minutes

Minutes of the monthly meeting of the Mid Hudson Astronomical Association, May 20, 2014

The meeting was called to order at 7:34 PM by President Willie Yee in the Coykendall Science Auditorium at SUNY, New Paltz, NY.

Approval of the minutes of the previous meeting was postponed to the next meeting due to the late publication of the newsletter.

Officer's Reports:

Membership: Caryn Sobel was not present.

Treasurer: Ken Bailey present. See his report in the newsletter.

Treasurer's Report for the month of May

Date: 14 June, 2014

Bank Balance:	\$2570.52
Outstanding Checks:	\$ 581.44
Outstanding Deposits:	\$ 250.00
Ending Bank Balance:	\$2239.08

Checkbook Balance:	\$2239.08
Balance with Bank: Yes	

Ending balance total:	\$2239.08
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Notes: Outstanding deposit is from the Bardavon. Outstanding checks are a speaker's honorarium and a reimbursement. IDA membership has been paid for 2014.

Respectfully submitted:	Ken Bailey Treasurer
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Outreach: Candace Wall not present but reported by email to Willie.

- **International Astronomy Day on the Walkway:** May 10. Bob Berman presentation. Estimated 500 people attended. Good outreach.

Upcoming events include:

- Received a request for a presentation from a school in Fishkill. Elli Lopatinsky coordinating.
- **Globe at Night:** May 19-28. Please participate to get more light pollution data points for the Hudson Valley.
- **Girl Scout Camporee:** May 30 at Ulster County Fairgrounds. Rick Versace coordinating.
- **Haviland School:** June 6. Hyde Park. Rick Versace Coordinating.
- **Sun Day:** June 22. (Willie not available.)
- **Olana events (Willie organizing):**
 - o Saturday, June 14, 6-9 PM (weather date June 15)
 - o Saturday, August 16, 2 PM (?), Sun Tour (weather date August 17)
 - o Sunday, September 21, 7-9 PM (no weather date)

Publicity: Paul Chauvet not present.

Webmaster: Paul Chauvet not present.

Upcoming programs: Joe Macagne

- June will be Steve Bellavia: Comets of 2013 – 2014.
- We need speakers. If you have any ideas or leads, let Joe or Willie know.

Old Business:

- Club Library – Ken has the library if any paid member wants to check out a video.
- Club telescopes:
 - o **13.1" Dobsonian Club Telescope:** Jack Chastain has it and will bring it to club events.
 - o **8" Dynamax SCT:** Joe Macagne has it and it is available to paid members.

- **6" Bausch & Lomb SCT:** Tom Crepet has it and it is available to paid members.
- **4" Tasco Newtonian:** Paul Chauvet has it and is using it.
- **10" Newtonian on EQ mount:** Candace has it and is looking for help. It has a few problems.
- Karl Loatman is willing to take the 10" Dobsonian we were offered if it is still available.

New Business:

- Willie requested the club buy another batch of solar glasses to give away at programs. Motion made, seconded, and passed to buy 1000 more at \$180.44.
- It was noted that the club has not renewed its membership in IDA since 2009. Ken Bailey volunteered to be our new representative and moved that we renew our membership for \$50. Motion seconded and passed.
- Rick Versace requested \$200 for materials for our outreach program at the Grey Fox music festival this summer. Motion made, seconded, and passed.
- Rick and Paul Granich also suggested that the club invest in a pop-up shelter with sides to be used at outreach events. A motion was made, seconded and approved to authorize Rick to spend up to \$300 on a shelter.
- Jim Rockrohr asked Willie if we had an inventory list of the club's assets. We are accumulating many telescopes and other things such as a video projector, the video library, laser pointers, slide projector, etc. A discussion ensued identifying many items and who has them. Willie agreed to make the list and post it on the web site.

Visitors/New Members:

No visitors introduced themselves. There were a total of about 15 people present for the meeting.

Observing Reports:

- Willie reported on the turnout at Earth Day in New Paltz.
- It was reported that there was good attendance at a girl scout event in Saugerties.
- The Boy Scout Camporall in Rhinebeck went well, although turnout at the telescopes was less than expected probably due to the scouts having a full day.
- Additional comments on the Walkway event with Bob Berman.

The meeting was adjourned at 7:54 PM. Next meeting is on June 17.

The program that followed was a talk by Rob Teeter of Teeter's Telescopes: **"Imitation to Innovation: How the Dobsonian Telescope Evolved."**

Submitted by James Rockrohr, June 15, 2014.

From the President:

Some Astronomical Art

While researching some examples of astronomy in art I came across two interesting items. The first is Rococo period painter Donato Creti (1671-1749) who did a series of paintings called "Astronomical Observations." Each painting depicts a scene with an observer and one or more accomplices viewing a celestial object. The object is painted quite enlarged, presumably the way it looked through a telescope of the day. An astronomical instrument is included in each painting painted from precise instruction that the artist received. Separate paintings depicted each of the known planets (up to Saturn), the moon, sun, and a comet.



Astronomical Observations - The Moon 1711
Donato Creti (1671-1749)

These paintings were commissioned by Count Luigi Marsili of Bologna in an attempt to convince Pope Clement XI to fund an observatory. The effort was successful, and an observatory was built a short time later.

This series of paintings can be found on the web at <http://www.christusrex.org/www1/vaticano/P4-Pinacoteca.html>.

Another interesting site I came across was a collection of paintings that featured the moon. These start with the above-mentioned Donato Creti, and go through Modernists including Paul Klee.



Mondaufgang von St Germain, 1914
Paul Klee (1879-1940)

This series can be viewed at <http://bjws.blogspot.com/2013/07/a-few-of-my-favorite-moons.html>

Dr. Willie K. Yee, President MHAA



A Glorious Gravitational Lens

By Dr. Ethan Siegel

As we look at the universe on larger and larger scales, from stars to galaxies to groups to the largest galaxy clusters, we become able to perceive objects that are significantly farther away. But as we consider these larger classes of objects, they don't merely emit increased amounts of light, but they *also* contain increased amounts of **mass**. Under the best of circumstances, these gravitational clumps can open up a window to the distant universe well beyond what any astronomer could hope to see otherwise.



The oldest style of telescope is the refractor, where light from an arbitrarily distant source is passed through a converging lens. The incoming light rays—initially spread over a large area—are brought together at a point on the opposite side of the lens, with light rays from significantly closer sources bent in characteristic ways as well. While the universe doesn't consist of large optical lenses, **mass itself** is capable of bending light in accord with Einstein's theory of General Relativity, and acts as a *gravitational lens*!

The first prediction that real-life galaxy clusters would behave as such lenses came from Fritz Zwicky in 1937. These foreground masses would lead to multiple images and distorted arcs of the same lensed background object, all of which would be magnified as well. It wasn't until 1979, however, that this process was confirmed with the observation of the Twin Quasar: QSO 0957+561.

Gravitational lensing requires a serendipitous alignment of a massive foreground galaxy cluster with a background galaxy (or cluster) in the right location to be seen by an observer at our location, but the universe is kind enough to provide us with many such examples of this good fortune, including one accessible to astrophotographers with 11" scopes and larger: Abell 2218.

Located in the Constellation of Draco at position (J2000): R.A. 16h 35m 54s, Dec. +66° 13' 00" (about 2° North of the star 18 Draconis), Abell 2218 is an extremely massive cluster of about 10,000 galaxies located 2 billion light years away, but it's *also* located quite close to the zenith for northern hemisphere observers, making it a great target for deep-sky astrophotography. Multiple images and sweeping arcs abound between magnitudes 17 and 20, and include galaxies at a variety of redshifts ranging from $z=0.7$ all the way up to $z=2.5$, with farther ones at even fainter magnitudes unveiled by Hubble. For those looking for an astronomical challenge this summer, take a shot at Abell 2218, a cluster responsible for perhaps the most glorious gravitational lens visible from Earth!

Learn about current efforts to study gravitational lensing using NASA facilities:

<http://www.nasa.gov/press/2014/january/nasas-fermi-makes-first-gamma-ray-study-of-a-gravitational-lens/>

Kids can learn about gravity at NASA's Space Place: <http://spaceplace.nasa.gov/what-is-gravity/>

Upcoming Star Parties and Events

June 22nd- International Sun Day

July 17-20 Grey Fox Music Festival

July 23 to July 27 Mason-Dixon Star Party, Wellsville, PA

July 25-Aug 2 AOS/RAC Summer Star Party, Plainfield MA

August 15th- Tivoli Free Library Programs

September 26 and October 24- Fishkill Plains Elementary School in Wappingers Falls

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. Call the Club Hotline for updated information. Everyone should meet at the gate at the scheduled time. The gate will be closed after that time.
- ♦ 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.