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Mid-Hudson Astronomical Association

January, 2018

Website: www.midhudsonastro.org

Yahoo Group: MHAstro

President : Jack Chastain
Secretary: Jim Rockrohr
Newsletter Editor: Rick Versace
Publicity: Paul Chauvet
Speakers: Paul Granich

Vice President: Paul Granich
Treasurer: Karen Tulchinsky
Membership Coordinator: Caryn Sobel
Webmaster: Paul Chauvet
Outreach: (open)
College Liaison: Dr. Amy Forestell

Board of Directors: Joe Macagne, Karl Loatman, Steve Carey, Willie Yee

Minutes of the monthly meeting of the Mid Hudson Astronomical Association, December 19, 2017

The meeting was called to order at 7:40 PM by President Willie Yee in the Coykendal Auditorium at SUNY, New Paltz, NY.

The minutes of the October and November meetings were approved as published in the newsletter.

Officer's Reports:

Membership: Caryn Sobel was not present.

Treasurer: Karen Tulchinski was present. Current balance is \$2431.84 plus dues received at the meeting. 2018 dues of \$25.00 are currently due.

Publicity: Paul Chauvet was present. He's working on 2018 star party schedule. Send him info on public events.

Webmaster: Paul Chauvet was present. No issues known.

Outreach:

- No upcoming events were reported.
- Annual Winter Star Party will be at Chiefland, Florida, February 11-18.

Upcoming programs: The following information was shared:

- (None reported)

Old Business:

- (none)

New Business:

- Motion was made and unanimously passed to honor Willie Yee for his many years of service to the club as he “retires” as president.
- Paul Chauvet mentioned that the New Paltz Evolutionary Studies program is sponsoring the EVOS Lectures and several of them are astronomy related. Check the SUNY New Paltz website for details.

Observing Reports:

- The club Star Party on December 16 had 3 people; Jack Chastain and two newbies. They had about 3-1/2 minutes of stars. It was cold and cloudy.
- Paul Chauvet reported seeing some meteors.
- Karl Loatman mentioned the Venus and the moon are great in the morning.
- Bill Walsh mentioned that he “heard” meteors; actually the radio effects of their ion trails on his HAM radio.

Visitors/New Members:

There were about 14 people in attendance at the end of the business meeting.

The meeting was adjourned at about 7:57 PM. The next meeting is on January 16th, 2018.

The presentations that followed at 8 PM included a presentation by Karl Loatman regarding the history of one of Frederick Church’s paintings, and Willie Yee presented some “Stellar Magic”. A large spread of Christmas goodies was enjoyed following the presentations.

Submitted by James Rockrohr, January 12th, 2017.



Sixty Years of Observing Our Earth

By Teagan Wall

Satellites are a part of our everyday life. We use global positioning system (GPS) satellites to help us find directions. Satellite television and telephones bring us entertainment, and they connect people all over the world. Weather satellites help us create forecasts, and if there’s a disaster—such as a hurricane or a large fire—they can help track what’s happening. Then, communication satellites can help us warn people in harm’s way.

There are many different types of satellites. Some are smaller than a shoebox, while others are bigger than a school bus. In all, there are more than 1,000 satellites orbiting Earth. With that many always around, it can be easy to take them for granted. However, we haven’t always had these helpful eyes in the sky.

The United States launched its first satellite on Jan. 31, 1958. It was called Explorer 1, and it weighed in at only about 30 pounds. This little satellite carried America’s first scientific instruments into space: temperature sensors, a microphone,

radiation detectors and more.

Explorer 1 sent back data for four months, but remained in orbit for more than 10 years. This small, relatively simple satellite kicked off the American space age. Now, just 60 years later, we depend on satellites every day. Through these satellites, scientists have learned all sorts of things about our planet.

For example, we can now use satellites to measure the height of the land and sea with instruments called altimeters. Altimeters bounce a microwave or laser pulse off Earth and measure how long it takes to come back. Since the speed of light is known very accurately, scientists can use that measurement to calculate the height of a mountain, for example, or the changing levels of Earth's seas.

Satellites also help us to study Earth's atmosphere. The atmosphere is made up of layers of gases that surround Earth. Before satellites, we had very little information about these layers. However, with satellites' view from space, NASA scientists can study how the atmosphere's layers interact with light. This tells us which gases are in the air and how much of each gas can be found in the atmosphere. Satellites also help us learn about the clouds and small particles in the atmosphere, too.

When there's an earthquake, we can use radar in satellites to figure out how much Earth has moved during a quake. In fact, satellites allow NASA scientists to observe all kinds of changes in Earth over months, years or even decades.

Satellites have also allowed us—for the first time in civilization—to have pictures of our home planet from space. Earth is big, so to take a picture of the whole thing, you need to be far away. Apollo 17 astronauts took the first photo of the whole Earth in 1972. Today, we're able to capture new pictures of our planet many times every day.

Today, many satellites are buzzing around Earth, and each one plays an important part in how we understand our planet and live life here. These satellite explorers are possible because of what we learned from our first voyage into space with Explorer 1—and the decades of hard work and scientific advances since then.

To learn more about satellites, including where they go when they die, check out NASA Space Place:
<https://spaceplace.nasa.gov/spacecraft-graveyard>



*This photo shows the launch of Explorer 1 from Cape Canaveral, Fla., on Jan. 31, 1958. Explorer 1 is the small section on top of the large Jupiter-C rocket that blasted it into orbit. With the launch of Explorer 1, the United States officially entered the space age.
Image credit: NASA*

2017 Star Party Schedule

Date	Time	Sunset	End Civil Twilight	Nearest New Moon
January 19th	7:00 PM	4:55 PM	5:25 PM	January 17th
February 16th	7:00 PM	5:30 PM	5:58 PM	February 15th
March 16th	7:00 PM	7:03 PM	7:31 PM	March 17th
April 13th	8:00 PM	7:34 PM	8:03 PM	April 16th
May 11th	8:00 PM	8:04 PM	8:35 PM	May 15th
June 15th	8:30 PM	8:31 PM	9:06 PM	June 13th
July 13th	8:30 PM	8:29 PM	9:02 PM	July 13th
August 10th	8:00 PM	8:00 PM	8:31 PM	August 11th
September 7th	7:30 PM	7:18 PM	7:46 PM	September 9th
October 5th	7:00 PM	6:30 PM	6:58 PM	October 9th
November 9th	7:00 PM	4:41 PM	5:10 PM	November 7th
December 7th	7:00 PM	4:25 PM	4:46 PM	December 7th

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.