



# Mid-Hudson Astronomical Association

## March, 2017

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

Yahoo Group: MHAstro

**President :** Willie Yee  
**Secretary:** Jim Rockrohr  
**Newsletter Editor:** Rick Versace  
**Publicity:** Paul Chauvet  
**Speakers:** Paul Granich

**Vice President:** Jack Chastain  
**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

### **Minutes of the monthly meeting of the Mid Hudson Astronomical Association, March 21, 2017**

The meeting was called to order at 7:29 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:** No report.

**Treasurer:** Ken Bailey was present. See his latest report as published in the newsletter.

### **Treasurer's Report for the month of February, 2017**

Date: 11 March, 2017

Bank Balance:	\$2277.48
Outstanding Checks:	\$ 0.00

Outstanding Deposits:           \$ 324.95  
Ending Bank Balance:           \$2602.43  
Checkbook Balance:           \$2602.43  
Balance with Bank: Yes

Ending balance total:           \$2602.43

Notes: Outstanding deposits are for 1 membership paid via PayPal and membership renewals from the February meeting and Jack's donation for the Criterion telescope.

Respectfully submitted:       Ken Bailey  
  Treasurer

### **Treasurer's Report for the month of March, 2017**

Date: 15 April, 2017

Bank Balance:                   \$2502.75  
Outstanding Checks:           \$ 0.00  
Outstanding Deposits:         \$ 50.00  
Ending Bank Balance:         \$2552.75  
Checkbook Balance:           \$2552.75  
Balance with Bank: Yes

Ending balance total:         \$2552.75

Notes: Outstanding deposit is for 2 memberships.

Respectfully submitted:       Ken Bailey for Karen Tulchinsky  
  Treasurer

#### **Outreach:**

- **Dutchess County Science Fair** – April 1. We will skip this year as there were no volunteers to attend.
- **NEAF** – April 8-9. We have a table. Let Willie know if you can help with it.
- **Mohonk Preserve viewing** – April 14. Not an MHAA sponsored event, but all are encouraged to attend. Raj Pandya is organizing it.
- **Earth Day, Reformed Church, New Paltz** – April 22. We will skip this year unless someone volunteers.
- **Earth Day March for Science** – April 22. Do we want to participate as a group (MHAA)? (see below) Several of our members are attending events in New York City and Washington DC.
- **Bright Ideas, High Meadow School, High Falls** – April 29. Solar, Willie and Jack Chastain.
- **Sam's Point Moon Viewing** – April/May. Willie coordinating dates.
- **Haviland School** – May 5. Rick Versace, Jack Chastain, Chuck Clark.
- **Michael Kurdish Preserve, Stamford NY** – May 19-20, Willie coordinating.
- **Pine Plains Library** – May 25. Indoor presentation with possible viewing if weather is OK. Jack Chastain.
- **Poughkeepsie Library Solar Viewing** –July. Willie coordinating.
- **Olana** – October 21. Willie coordinating.

**Publicity:** Paul Chauvet was not present. Send him info on public events.

**Webmaster:** Paul Chauvet was not present. No issues known.

**Upcoming programs:** The following information was shared:

- April: (TBD)
- May: "How Superman Sees the Stars" by Dr. David J. Helfand, Columbia University.

**Old Business:**

- **Club Telescopes:**
  1. We still have the "classic" Meade LX-200. It needs a pier or tripod. Looking for a worthy organization to donate it to.
  2. Joe Macagne has the ETX 125
  3. Paul Chauvet has the 4" reflector.
  4. Jack Chastain has the 13" dobsonian. Adding platform and wedge.

**New Business:**

- Willie to send support letters for Pine Plains and Poughkeepsie Libraries as they apply for NASA education grants.
- Does MHAA want to be a co-sponsor of the March for Science on April 22<sup>nd</sup>? It was moved, seconded and unanimously passed that we should be a sponsor. It was moved, seconded, and unanimously passed to contribute \$100 to the local organizers of the march (or the national organizers if there is no local organization).

**Observing Reports:**

- Willie gave a brief report on the Winter Star Party in Florida. A fuller report will be in the next Newsletter.
- Ken reported on the last club star party on March 4<sup>th</sup>. Very cold and very low attendance, but 12 year old Alex O'Neill was awarded a "Polar Bear" certificate for sticking it out.

**Visitors/New Members:**

There were about 24 people in attendance at the end of the business meeting.

The meeting was adjourned at about 7:54 PM. The next meeting is on April 18<sup>th</sup>.

The presentation that followed was "Diffraction of Light and Astronomy" by Steven Bellavia.

Submitted by James Rockrohr, April 15, 2017.

From the President:

### **Winter Star Party 2017**

This was my fifth (?) Winter Star Party, held annually in the Florida Keys for 33 years now. Attendance had been down in recent years, and my impression was that we had a few more people than last year. Some vendors were absent, but Howie Glatter and Televue were there. I got to demonstrate my magic 1-1/4" to 2" eyepiece changer, which Uncle Al got a kick out of.

We had two nights with a couple hours of viewing between sucker holes, one night of a storm, and

ended with three good nights. Not my worst year. Mostly I was chasing Caldwell objects, and I have taken an intense dislike for Sir Patrick Moore. I think he is stuck in hell looking for his objects with a 60 mm department store refractor on a wobbly mount. Big highlight was looking at a couple of galaxies though Mike Lockwood's 32" dob. At that aperture, these targets start to look like the photographs of them.

Speaking of Mike Lockwood, the renowned mirror-maker gave a presentation on mirror cooling. The short version is, mirrors, especially large ones, are best cooled with fans on both the front and the back. His preferred arrangement is to have the front fan suspended above the center of the primary mirror, where it is hidden during viewing by the secondary mirror.

The other presentation with a take-home was by Rebecca Ljungren, Astronomy Educator at the Smithsonian National Air and Space Museum. Her message was that if she can do outreach in the middle of downtown Washington, D.C., so can you. Do not be put off by light pollution; even though we have seen Jupiter and Moon hundreds of times, the people who will be coming have never seen it. A view of just one of those targets will be an exciting event, something we can engage people with, and who knows who will be inspired to seek the stars in some major way. It was an extreme version of something I have said before: Access trumps darkness when doing outreach.

Next year is a little in doubt for me personally, because the camp will be tearing down the shelters, eventually replacing them with a dormitory of some sort. If neither are available by next year, I will not be going. After my first year's experience in a tent in a windstorm, I said never again. Stay tuned.

Dr. Willie Yee  
MHAA President



### **NOAA's Joint Polar Satellite System (JPSS) to monitor Earth as never before**

By Ethan Siegel

Later this year, an ambitious new Earth-monitoring satellite will launch into a polar orbit around our planet. The new satellite—called JPSS-1—is a collaboration between NASA and NOAA. It is part of a mission called the Joint Polar Satellite System, or JPSS.

At a destination altitude of only 824 km, it will complete an orbit around Earth in just 101 minutes, collecting extraordinarily high-resolution imagery of our surface, oceans and atmosphere. It will obtain full-planet coverage every 12 hours using five separate, independent instruments. This approach enables near-continuous monitoring of a huge variety of weather and climate phenomena.

JPSS-1 will improve the prediction of severe weather events and will help advance early warning systems. It will also be indispensable for long-term climate monitoring, as it will track global rainfall, drought conditions and ocean properties.

The five independent instruments on board are the main assets of this mission:

- The Cross-track Infrared Sounder (CrIS) will detail the atmosphere's 3D structure, measuring water vapor and temperature in over 1,000 infrared spectral channels. It will enable accurate weather forecasting up to seven days in advance of any major weather events.
- The Advanced Technology Microwave Sounder (ATMS) adds 22 microwave channels to CrIS's measurements, improving temperature and moisture readings.
- Taking visible and infrared images of Earth's surface at 750 meter resolution, the Visible Infrared Imaging Radiometer Suite (VIIRS) instrument will enable monitoring of weather patterns, fires, sea temperatures, light pollution, and ocean color observations at unprecedented resolutions.
- The Ozone Mapping and Profiler Suite (OMPS) will measure how ozone concentration varies with altitude and in time over every location on Earth's surface. This can help us understand how UV light penetrates the various layers of Earth's atmosphere.
- The Clouds and the Earth's Radiant System (CERES) instrument will quantify the effect of clouds on Earth's energy balance, measuring solar reflectance and Earth's radiance. It will greatly reduce one of the largest sources of uncertainty in climate modeling.



The information from this satellite will be important for emergency responders, airline pilots, cargo ships, farmers and coastal residents, and many others. Long and short term weather monitoring will be greatly enhanced by JPSS-1 and the rest of the upcoming satellites in the JPSS system.

Want to teach kids about polar and geostationary orbits?  
Go to the NASA Space Place:

<https://spaceplace.nasa.gov/geo-orbits/>

*Caption: Ball and Raytheon technicians integrate the VIIRS Optical and Electrical Modules onto the JPSS-1 spacecraft in 2015. The spacecraft will be ready for launch later this year. Image Credit: Ball Aerospace & Technologies Corp.*

## 2017 Star Party Schedule

<i>Date</i>	<i>Time</i>	<i>Sunset</i>	<i>End Civil Twilight</i>	<i>Nearest New Moon</i>
January 27th	7:30PM	5:05PM	5:35PM	January 27th
March 3rd	7:30PM	5:49PM	6:17PM	February 26th
March 24th	7:30PM	7:13PM	7:40PM	March 27th
April 28th	8:00PM	7:51PM	8:21PM	April 26th
May 26th	8:30PM	8:19PM	8:52PM	May 25th
June 30th	8:30PM	8:34PM	9:09PM	June 23rd
July 28th	8:30PM	8:18PM	8:49PM	July 23rd
August 18th	8:30PM	7:51PM	8:20PM	August 21st
September 22nd	7:30PM	6:52PM	7:20PM	September 20th
October 20th	7:30PM	6:06PM	6:35PM	October 19th
November 17th	7:30PM	4:33PM	5:04PM	November 18th
December 15th	7:30PM	4:26PM	4:48PM	December 18th

### 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 3<sup>rd</sup> 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](http://www.midhudsonastro.org).