



Mid-Hudson Astronomical Association

April, 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, March 15, 2016

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 were approved as published in the most recent newsletter.

Officer's Reports:

Membership: Caryn Sobel was not present. She reported via email to Willie that we had 56 paid members, 8 new in January, 16 renewed, 9 advocates, 4 life members and 1 guest membership.

Treasurer: Ken Bailey was present, but see his latest report as published in the newsletter. Karen Tulchinsky will be taking over the treasurer's job this summer from Ken. Thanks, Karen!

Treasurer's Report for the month of March, 2016

Date: 16 April, 2016

Bank Balance:	\$2340.16
Outstanding Checks:	\$ 101.87
Outstanding Deposits:	\$ 274.97
Ending Bank Balance:	\$2513.26
Checkbook Balance:	\$2513.26
Balance with Bank: Yes	

Ending balance total: \$2513.26

Notes: Outstanding deposits are deposits for membership dues from PayPal and deposit of membership dues paid at last meeting. Outstanding check is for Dutchess County Science Fair prizes.

Respectfully submitted: Ken Bailey
Treasurer

Outreach: Candace Wall was present and the following were discussed:

- **Dutchess County Science Fair:** Morning of April 2. Steve Carey coordinating.
- **Stone Ridge Public Academic Fair:** Saturday, April 2, 12 – 4 PM, requesting a S.T.E.A.M. Focused (Science, Technology, Engineering, Arts, and Mathematics) presentation. Willie and Jack Chastain will supply solar 'scopes.
- **Earth Day in New Paltz:** April 16. Willie coordinating solar viewing. Could use some help.
- **Fishkill Plains Elementary School:** Looking for a presentation and star gazing on a Wednesday or Thursday in March, April, or May. Willie will do one on Monday, April 18.
- **Sam's Point:** Looking for a day time solar weekend day event in early spring. April 15th for moon viewing, April 23 for solar. Willie coordinating with Candace Wall and Jack Chastain.
- **Olana:** Current dates are April 23 and September 3 (Labor Day weekend). Also looking for 'scopes on their Movie nights July 29 and August 26.
- **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. Joe Macagne working on this.
- **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. Willie is coordinating.
- **Haviland Middle School:** Looking for a presentation and viewing. Date TBD. Rick Versace coordinating.
- **Smithfield Park in Monroe:** Looking for something in May and September.

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

Webmaster: Paul Chauvet present. No issues known.

Upcoming programs: Candace Wall was present and the following information was shared:

- April – Tarun Biswas
- May – Steve Bellavia
- June – (TBD)
- July – (TBD)
- August – (TBD)
- September – Chris Kendall

Old Business:

- **NEAF volunteers:** Need volunteers to sit at our table at NEAF, April 9 and 10. Several people volunteered at the meeting. Willie will coordinate schedule.
- **Club Telescopes:**
 - 13" Dobsonian (Jack Chastain). Mirror removed. Will be sending it for recoating out soon.
 - Criterion 8" SCT is available. Tabletop use (no tripod). See Willie.
 - ETX 125 has a focuser issue. Willie has it.
 - 4" with Paul Chauvet.
 - 8" Newtonian on an equatorial mount needs to be picked up by Ken Bailey from Karl Loatmann to be transferred Ken's son's new astronomy club in South Carolina.

New Business:

- Mel Kleiman is looking for help to collimate an SCT. Jack Chastain volunteered to help him.

Observing Reports:

- **Lake Taghkanic Star Party in March** – Good turnout, good viewing, but cold.

Visitors/New Members:

There were over 35 people in attendance.

The meeting was adjourned at about 7:55 PM. The next meeting is on April 19th. The program that followed was "Exoplanets: Strange New Worlds" by Willie Yee with remote help from his daughter Jennifer Yee.

Submitted by James Rockrohr, April 17, 2016.

From the President:

This winter:





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

Hubble Shatters The Cosmic Record For Most Distant Galaxy

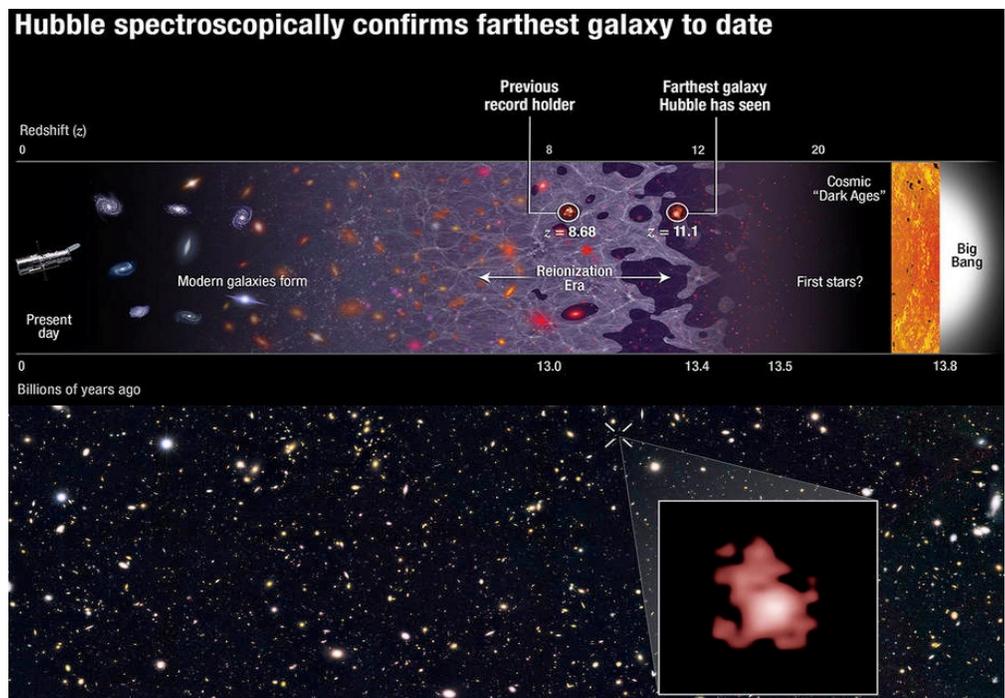
By Ethan Siegel

The farther away you look in the distant universe, the harder it is to see what's out there. This isn't simply because more distant objects appear fainter, although that's true. It isn't because the universe is expanding, and so the light has farther to go before it reaches you, although that's true, too. The reality is that if you built the largest optical telescope you could imagine -- even one that was the size of an entire planet -- you still wouldn't see the new cosmic record-holder that Hubble just discovered: galaxy GN-z11, whose light traveled for 13.4 billion years, or 97% the age of the universe, before finally reaching our eyes.

There were two special coincidences that had to line up for Hubble to find this: one was a remarkable technical achievement, while the other was pure luck. By extending Hubble's vision away from the ultraviolet and optical and into the infrared, past 800 nanometers all the way out to 1.6 microns, Hubble became sensitive to light that was severely stretched and redshifted by the expansion of the universe. The most energetic light that hot, young, newly forming stars produce is the Lyman- α line, which is produced at an ultraviolet wavelength of just 121.567 nanometers. But at high redshifts, that line passed not just into the visible but all the way through to the infrared, and for the newly discovered galaxy, GN-z11, its whopping redshift of **11.1** pushed that line all the way out to 1471 nanometers, more than double the limit of visible light!

Hubble itself did the follow-up spectroscopic observations to confirm the existence of this galaxy, but it also got lucky: the only reason this light was visible is because the region of space between this galaxy and our eyes is mostly ionized, which *isn't true*

of most locations in the universe at this early time! A redshift of 11.1 corresponds to just 400 million years after the Big Bang, and the hot radiation from young stars doesn't ionize the majority of the universe until 550 million years have passed. In most directions, this galaxy would be invisible, as the neutral gas would block this light, the same way the light from the center of our galaxy is blocked by the dust lanes in the galactic plane. To see farther back, to the universe's first true galaxies, it will take the James Webb Space Telescope. Webb's infrared eyes are much less sensitive to the light-extinction caused by neutral gas than instruments like Hubble. Webb may reach back to a redshift of 15 or even 20 or more, and discover the true answer to one of the universe's greatest mysteries: when the first galaxies came into existence!



Images credit: (top); NASA, ESA, P. Oesch (Yale University), G. Brammer (STScI), P. van Dokkum (Yale University), and G. Illingworth (University of California, Santa Cruz) (bottom), of the galaxy GN-z11, the most distant and highest-redshifted galaxy ever discovered and spectroscopically confirmed thus far.

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.