



Mid-Hudson Astronomical Association

July, 2015

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: Ken Bailey
Membership Coordinator: Caryn Sobel
Webmaster: Paul Chauvet
College Liaison: Dr. Amy Forestell

Directors: Karl Loatman, Steve Carey, Joe McCagne, and Dave Lindemann

Minutes of the monthly meeting of the Mid Hudson Astronomical Association, June 16, 2015

The meeting was called to order at 7:27 PM by Treasurer Ken Bailey in the Coykendall Auditorium at SUNY, New Paltz, NY. (President Willie Yee and Vice President Candace Wall were not available.)

It was moved and seconded that the minutes of the last meeting as published in the newsletter be approved. The motion passed.

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 June, 2015

Date: 12 July, 2015

Bank Balance:	\$1763.23
Outstanding Checks:	\$ 0
Outstanding Deposits:	\$ 0
Ending Bank Balance:	\$1763.23
Checkbook Balance:	\$1763.23
Balance with Bank: Yes	

Ending balance total: \$1763.23

Notes: There are no outstanding checks or deposits at this time. We are still working on a problem with a check from Olana. The problem with the Olana check should be fixed by meeting night.

Respectfully submitted: Ken Bailey
Treasurer

Outreach: Candace Wall was not available, but the following were discussed:

- Planning for an event requested by Vassar college; date TBD
- Event with Boy Scouts next Saturday (6/20)
- **Mason-Dixon Star Party:** July 15-19, Ken Bailey going.
- **Saugerties High School:** October 23.
- **Saugerties Science Fair:** November 13.

Publicity: Paul Chauvet was not present.

Webmaster: Paul Chauvet was not present.

Upcoming programs: Candace Wall not present.

Old Business:

- Renewal for club's membership in IDA is due. Motion approved for renewal.

New Business:

- Ken requested approval to provide a t-shirt and sweatshirt to the raffle at the Mason-Dixon Star Party. Motion Approved.

Observing Reports:

- Jupiter and Venus "merging" on 6/30. Very close conjunction.
- Jim R. attended StarConn at Wesleyan College. "mini NEAF". Talks were focused on Amateur/Professional collaborations. Next one is June 18, 2016.
- Relay for Life: no observing due to clouds, but model solar system was well received.

Visitors/New Members:

There was a total of about 28 people in attendance.

The meeting was adjourned at 7:46 PM. Next meeting is on July 21st. The program that followed at 8:00 PM was "Asteroids, Amino Acids, and the Origin of Life" by Professor Wayne Roberge of the NY Center for Astrobiology at the RPI Physics Department.

Submitted by James Rockrohr, July 15, 2015.

From the President :

AOS Celebrates 50 years

On May 16, 2015, the Amateur Observers Society of Long Island celebrated its 50th anniversary with a dinner and ceremony. Some of the original founders came from great distances to attend. They are still around to tell their stories, since they were quite young when they founded AOS. There were a few kids in New York who had a passion for astronomy. They wanted to be able to plan outings to go upstate and elsewhere to go observing. Neither the main astronomical society in New York, nor its youth branch were interested, so they started their own club. They were between 12 and 16 years old, but managed to secure a meeting space and some adult sponsors. They put out their own newsletter using mimeograph (who remembers that?) technology, and did arrange their out-of-town observing sessions.

There were a number of stories told about the early years of AOS, but the most interesting one, in my opinion, was told by Joe Rao. Joe is a professional meteorologist, and does broadcasts for a Westchester station. Yes, AOS has their own professional meteorologist who can give the members personalized weather forecasts. Joe told of a total lunar eclipse that the group wanted to observe, and they wanted to observe it from the observation deck of the Empire State Building. A couple of them went to meet with the manager of the obs deck to see if this could be arranged. This guy wanted no part of it. So he told them that since the deck was closed at midnight, and the eclipse was happening after that, that they would have to pay \$1000 to have access for the eclipse.

The kids left dejected, since there was no way they had access to that kind of money. But down on the street, one of them suggested, "Hey, lets just tell him we'll pay the thousand bucks." They went back into the building and told the manager exactly that, and the plans went forward for the observation.

Come the night of the eclipse, the entire eastern seaboard was socked in with a fog that reached up to about 1000 feet. The only people who saw the lunar eclipse were those kids on top of the Empire State Building! A reporter was there from the New York Times (arranged by one of the club's sponsor adults with connections), and a story appeared in the Times the next day. Once the story was seen by the director of the Empire State Building, he got quite excited at the publicity, and called the deck manager to congratulate him—and to tell him to forget about charging the kids the \$1000!

Subsequent to this, the Empire State Building started using astronomical events as fund-raising opportunities. This came just in time, as the World Trade Center was offering some serious competition. But the ESB could allow open access to the sky with telescopes, which the WTC could not.

So, if anyone asks you what the definition of "chutzpah" is, just point them to the founders of AOS. And they lasted 50 years.

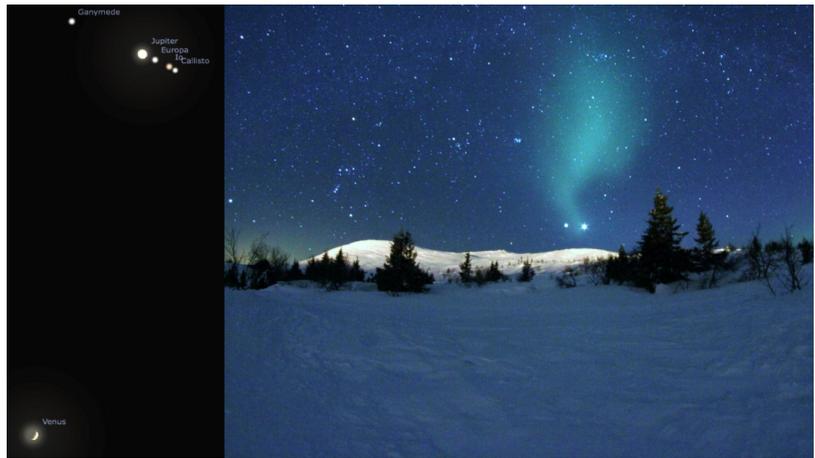
Dr. Willie Yee
MHAA President

On The Brightness Of Venus

By Dr. Ethan Siegel

Throughout the past few months, Venus and Jupiter have been consistently the brightest two objects visible in the night sky (besides the moon) appearing in the west shortly after sunset. Jupiter is the largest and most massive planet in the solar system, yet Venus is the planet that comes closest to our world. On June 30th, Venus and Jupiter made their closest approach to one another as seen from Earth—a conjunction—coming within just 0.4° of one another, making this the closest conjunction of these two worlds in over 2,000 years.

And yet throughout all this time, and especially notable near its closest approach, Venus far outshines Jupiter by 2.7 astronomical magnitudes, or a factor of 12 in apparent brightness. You might initially think that Venus's proximity to Earth would explain this, as a cursory check would seem to show. On June 30th Venus was 0.5 astronomical units (AU) away from Earth, while Jupiter was six AU away. This appears to be exactly the factor of 12 that you need.



Only this doesn't explain things at all!

Brightness falls off as the inverse square of the distance, meaning that if all things were equal, Venus ought to seem not 12 but 144 times brighter than Jupiter. There are three factors in play that set things back on the right path: size, albedo, and illumination. Jupiter is 11.6 times the diameter of Venus, meaning that despite the great difference in distance, the two worlds spanned almost exactly the same angular diameter in the sky on the date of the conjunction. Moreover, while Venus is covered in thick, sulfuric acid clouds, Jupiter is a reflective, cloudy world, too. All told, Venus possesses only a somewhat greater visual geometric albedo (or amount of reflected visible light) than Jupiter: 67 percent and 52 percent, respectively. Finally, while Venus and Jupiter both reflect sunlight toward Earth, Jupiter is always in the full (or almost full) phase, while Venus (on June 30th) appeared as a thick crescent.

All told, it's a combination of these four factors—distance, size, albedo, and the phase-determined illuminated area—that determine how bright a planet appears to us, and all four need to be taken into account to explain our observations.

Don't fret if you missed the Venus-Jupiter conjunction; three more big, bright, close ones are coming up later this year in the eastern pre-dawn sky: Mars-Jupiter on October 17, Venus-Jupiter on October 26, and Venus-Mars on November 3.

Keep watching the skies, and enjoy the spectacular dance of the planets!

Image credit: E. Siegel, using the free software Stellarium (L); Wikimedia Commons user TimothyBoocock, under a c.c.-share alike 3.0 license (R). The June 30th conjunction (L) saw Venus and Jupiter pass within 0.4° of one another, yet Venus always appears much brighter (R), as it did in this image from an earlier conjunction.

2015 Star Party Schedule

Date	Time	Sunset	End Civil Twilight	Nearest New Moon
January 16th	7:30 PM	4:51 PM	5:22 PM	January 20th
February 13th	7:30 PM	5:26 PM	5:55 PM	February 18th
March 20th	8:00 PM	7:08 PM	7:36 PM	March 20th
April 17th	8:30 PM	7:39 PM	8:08 PM	April 18th
May 15th	8:30 PM	8:09 PM	8:41 PM	May 17th
June 19th	8:30 PM	8:34 PM	9:09 PM	June 16th
July 17th	8:30 PM	8:28 PM	9:01 PM	July 15th
August 14th	8:30 PM	7:58 PM	8:28 PM	August 14th
September 11th	8:00 PM	7:13 PM	7:41 PM	September 12th
October 9th	7:30 PM	6:25 PM	6:52 PM	October 12th
November 13th	7:30 PM	4:37 PM	5:07 PM	November 11th
December 11th	7:30 PM	4:25 PM	4:56 PM	December 11th

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.