



Mid-Hudson Astronomical Association

October, 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, September 15, 2015

The meeting was called to order at 7:31 PM by President Willie Yee in the Auditorium of the Coykendall Science Center at SUNY, New Paltz, NY.

The minutes of the last two meetings were approved as published in the most recent newsletter.

Officer's Reports:

Membership: Caryn Sobel was not present.

Treasurer: Ken Bailey was not present, but see his latest report as published in the newsletter.

Treasurer's Report for the month of September, 2015

Date: 14 October, 2015

Bank Balance:	\$1945.83
Outstanding Checks:	\$ 0
Outstanding Deposits:	\$ 30.00
Ending Bank Balance:	\$1975.83
Checkbook Balance:	\$1975.83
Balance with Bank: Yes	

Ending balance total: \$1975.83

Notes: Outstanding deposit is a contribution from Avalon Assisted Living Facility for a program in August. Checks are on order.

Respectfully submitted: Ken Bailey
Treasurer

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

- **International Observe the Moon Night at Smolen Observatory:** 9/19, Willie Yee
- **Esopus Library:** 9/24, Rick Versace and Jack Chastain
- **Avalon Senior Citizens Center:** 9/24, Willie Yee and Ken Bailey
- **Lunar Eclipse observing at Lake Taghkanic SP:** 9/27, Ken Bailey
- **Lunar Eclipse observing at the Smolen Observatory:** 9/27, Willie Yee
- **Walkway "Starry, Starry Night" gala:** October 2. (Not firm)
- **Saugerties High School:** October 23, Ken Bailey
- **Saugerties Science Fair:** November 13. Ken Bailey

Publicity: Paul Chauvet present. He will have a "Square" device to allow us to accept credit card payments through a cell phone by the end of the week. It will be attached to his personal account, for now, to see how it works.

He also has our events listed on Chronogram's web site and is working on getting them in the print version.

Webmaster: Paul Chauvet present. No issues known.

Upcoming programs: Candace Wall present. Speakers are set for October through December.

Old Business:

- Club Telescopes:
 - o 13" Dobsonian in use (Jack Chastain). No progress on getting mirror resurfaced.
 - o Criterion 8" SCT is available. Tabletop use (no tripod). See Willie.
 - o ETX 125 has a focuser issue. Jo Macagne will fix it with a JMI remote focuser add-on.
 - o 4" with Paul Chauvet.
 - o 8" Dobsonian with Karl Loatmann.
 - o We agreed to donate an ETX 125 to a new club. Who has this 'scope? Consensus is Tom Crepet has it and uses it for outreach. Willie to follow up.

New Business:

- Discussion about raising dues to cover the costs of PayPal and credit card payments. It was moved that the full year dues be increased to \$27 with a discount to \$25 if paid by cash or check. Similarly, the ½ year dues (paid after July 1) be raised to \$17.50 with a discount to \$15.00 if paid by cash or check. After discussion, the motion passed. (This was

already discussed and approved at the January, 2015, meeting.) **Our documentation needs to be updated to show the new dues structure.**

- It was noted that the club by-laws state that the dues for new members should be prorated for each month rather than just reducing the dues on July 1st. Paul Chauvet will look into the procedures for officially changing the by-laws to make it match our current practice.

Observing Reports:

- (None mentioned)

Visitors/New Members:

There was a total of about 23 people in attendance, 5 introduced themselves as new.

The meeting was adjourned at 7:48 PM. Next meeting is on October 20th. The program that followed at 8:00 PM was “Lumps, Bumps, and Wiggles in the Milky Way Galaxy” by Prof. Heidi Jo Newburg, Professor of Physics at RPI discussing her current research regarding the 3 dimensional shape of the Milky Way’s disk.

Submitted by James Rockrohr, October 13, 2015.

Presidents Note

Rockland Astronomy Club, with the Amateur Observers Society of Long Island held their annual star party at Peppermint Park in Plainfield, MA, about a 2 ½ hour drive from New Paltz. For some reason, I was the only MHAA member to attend this year.

I drove up on Friday, August 7, and set up the big tent which Joe Macagne had lent me. As I unpacked everything, I had the gradual realization that I had forgotten something—he truss poles for my dob. I conslited with the RAC folks to find someone who might be coming up from Rockland or somewhere south who could stop by New Paltz and pick up my poles. Alas, no one was found, so I had to spend Saturday driving down to New Paltz and back. I humbly submitted my application to AOS for the Stupid Award.

I had my 80 mm Apo refractor with the modified iOptron Mini-tower mount, so I got some observing done on Friday night. The mount was plagued with some sort of power problem and kept re-booting itself and losing alignment making for a rather frustrating evening. I was not able to complete any sketches for the Astronomical League’s Sketching Program that I am working on.

It was very cold in the tent, my summer sleeping barely adequate for the temperature. I exchanged it for a warmer bag on Saturday when I made the run to get my truss poles. Saturday night was clouded out.

Sunday evening Aug 9 was better. During the day I set up the solar scopes and got a view of a spectacular sunspot group (AR 2396). At night the seeing and transparency were fair, but the dew was SERIOUS. Everything soaking by the first hour. Towels and all available dew control equipment turned up max. I sketched four objects including NGC652 and B 86. This was one of the clearest viees I have had of a dark nebula, and was fun to share with the other observers.

Monday and Tuesday were forecast to be cloudy and rainy. Since it was only a 2½ drive home, it was worth it to go home rather than spend two nights and a very rainy day inside a tent. On my return on Wednesday, a few things I had left in the tent were wet or damp, but it was all manageable. It got very hot, especially inside the tent.

Wednesday the 12th was a fair night. My Teeter dob with its Argo Navis was working extremely well, locating objects with great precision. I was able to get about the clearest view ever of the Cassini division in the rings of Saturn. I got 7 objects sketched, and also got to spend some time looking through Denkmeier’s 3-D effect binoviewer eyepieces (These have been reviewed on Cloudy Nights. <http://www.cloudynights.com/page/articles/cat/user-reviews/the-lederman->

[optical-array-loa-21-3d-eyepiece-r2997](#)).

Thursday was predicted to be the best night. It was clear the whole night. I sketched another half-dozen objects including the Eastern Veil Nebula. When I quit around 2 AM it was still clear, but I was tired.

Friday was cloudy during the day, still hot, so I opened the top of the tent to let the hot air escape. As evening approached, we could see a thunderstorm approaching. I took out my bedding and clean clothes and put them in the car, and decided to sit out the storm in the car. I lasted about an hour with some pretty heavy rainfall for a while. When it was over, I was glad I had brought most of my stuff into the car, because I had forgotten to replace the rain fly. This tent is open at the top, with only mosquito netting covering the opening. The tent was basically an open nylon bucket, and gathered about a half an inch of water. I bailed it out, was able to sleep dry with what I had stashed in the car, and made another entry onto my application for the Stupid Award.

Saturday night started out mostly cloudy, and was supposed to clear around 2 AM. I managed to split and sketch the Double Double in Lyra before turning in. A heavy fog rolled in and shut everyone down. I awoke at 2:30 AM, and it was clear though poor transparency and there was no one on the observing field, so I turned in.

Aside from the weather, the conditions were pretty good at the campground. There was a good observing field with relatively unobstructed views. The campground folks had turned out or replaced all the white lights. The camping facilities were cleaned and well maintained without the pervading sense of cheapness that afflicts many campgrounds.

The skies were pretty good. I could just make out all the stars in the Little Dipper, and my Sky Quality Meter read 21.36, which is actually better than the readings I got at the Winter Star Party in Florida (21.10). Seeing was nowhere as good, though.

Two things for followup: First, RAC would like to make this a multi-club event. AOS was there for the first weekend, and make it their StarFest, since they no longer have the Stone Tavern site. We are invited to participate next year. We could have a tent area, a table space, and share in the publicity. The dates are July 29-August 7, 2016.

Second, the night I was gone, they screened "World Enough and Time," an episode of Star Trek Phase II / New Voyages. They were so impressed with it, that Ed Siemenn, the director for NEAF, invited STNV to come down and do a presentation or showing at NEAF. Now I will have an excuse (like I needed any?) to wear my Starfleet uniform at NEAF.



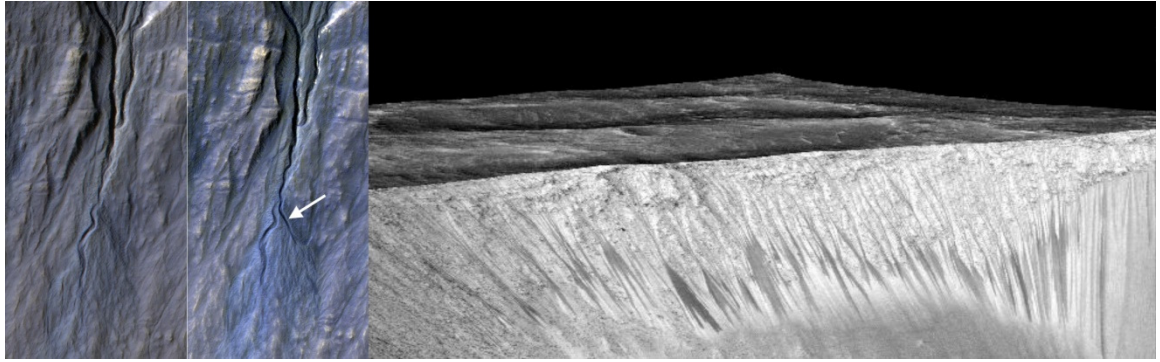
How we know Mars has liquid water on its surface

by Ethan Siegel

Of all the planets in the solar system other than our own, Mars is the one place with the most Earth-like past. Geological features on the surface such as dried up riverbeds, sedimentary patterns, mineral spherules nicknamed "blueberries," and evidence of liquid-based erosion all tell the same story: that of a wet, watery past. But although we've found plenty of evidence for molecular water on Mars in the solid (ice) and gaseous (vapor) states, including in icecaps, clouds and subsurface ices exposed (and sublimated) by digging, that in no way meant there'd be water in its liquid phase today.

Sure, water flowed on the surface of Mars during the first billion years of the solar system, perhaps producing an ocean a mile deep, though the ocean presence is still much debated. Given that life on Earth took hold well within that time, it's conceivable that Mars was once a rich, living planet as well. But unlike Earth, Mars is small: small enough that its interior cooled and lost its protective magnetic field, enabling the sun's solar wind to strip its atmosphere away. Without a significant atmosphere, the liquid phase of water became a virtual impossibility, and Mars became the arid world we know it to be today.

But certain ions—potassium, calcium, sodium, magnesium, chloride and fluoride, among others—get left behind when the liquid water disappears, leaving “salt” residue of



Images credit: NASA/JPL-Caltech/Univ. of Arizona, of a newly-formed gully on the Martian surface (L) and of the series of gullies where the salt deposits were found (R).

mineral salts (that may include table salt, sodium

chloride) on the surface. While pure liquid water may not persist at standard Martian pressures and temperatures, extremely salty, briny water can indeed stay in a liquid state for extended periods under the conditions on the Red Planet. It's more of a "sandy crust" like you'd experience on the shore when the tide goes out than the flowing waters we're used to in rivers on Earth, but it means that under the right temperature conditions, liquid water does exist on Mars today, at least in small amounts.

The measured presence and concentration of these salts, found in the dark streaks that come and go on steep crater walls, combined with our knowledge of how water behaves under certain physical and chemical conditions and the observations of changing features on the Martian surface supports the idea that this is the action of liquid water. Short of taking a sample and analyzing it in situ on Mars, this is the best current evidence we have for liquid water on our red neighbor. Next up? Finding out if there are any single-celled organisms hardy enough to survive and thrive under those conditions, possibly even native to Mars itself!

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.