



Mid-Hudson Astronomical Association

November, 2013

Website: www.midhudsonastro.org

Yahoo Group: MHAstro

President : Willie Yee
Secretary: Jim Rockrohr
Newsletter Editor: Rick Versace
Publicity: Paul Chauvet
Parks Liaison:

Vice President: Joe Macagne
Treasurer: Ken Bailey
Membership Coordinator: Caryn Sobel
Webmaster: Sean Dague
College Liaison: Dr. Amy Forestell

Directors: Steve Carey, Dave Lindemann, Karl Loatman, & Tom Rankin

Meeting Minutes

Minutes of the monthly meeting of the Mid Hudson Astronomical Association, October 15, 2013

The meeting was called to order at 7:31 PM by President Willie Yee in Lecture Center Room 102 at SUNY, New Paltz, NY.

The minutes of the previous meeting were approved as published in the newsletter.

Officer's Reports:

Membership: Caryn Sobel was not present.

Treasurer: Ken Bailey was not present.

Treasurer's Report for the month of October

Date: 16 November, 2013

Bank Balance:	\$2139.10
Outstanding Checks:	\$ 100.00
Outstanding Deposits:	\$ 250.00
Ending Bank Balance:	\$2289.10

Checkbook Balance:	\$2289.10
Balance with Bank: Yes	

Ending balance total:	\$2289.10
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Notes: Outstanding checks are all for Speaker's Honorariums. Outstanding deposit is a donation from The Bardavon for club participation in the Walkway Bardavon Fundraiser.

Respectfully submitted: Ken Bailey
Treasurer

Outreach: Candace Wall

Upcoming events include:

- Walkway Over the Hudson has asked for 'scopes for their moon walk on October 16. Cloud date is Friday, October 19.
- Saugerties High School wants a presentation and star party on November 8. Paul Granich is coordinating.
- We will be giving a presentation at Olana on November 9. Willie is coordinating. Karl Loatman will give a talk on comets.

Publicity: Paul Chauvet is soliciting input on upcoming activities to publicize.

Webmaster: Sean Dague was not present.

Upcoming programs: Joe MaCagne

- November will be a presentation on filters by Jeff Norwood.
- December will be the annual member's talks and Christmas party.

Old Business:

Video Library: Ken not present to report.

13.1" Club Telescope: Karl Loatman has it and it is available to any paid member who would like to use it.

8" Dynamax SCT: Willie Yee has it and it is also available to paid members.

8" DOB: Maureen mentioned the club used to own an 8" dobsonian. Discussion followed and we think it was loaned to a member who subsequently moved to Colorado.

Karl Loatman also mentioned that the club once owned a 6" Bausch & Lomb SCT and he thinks Tom Crepet has it.

Other Club telescopes: Paul Chavet has the 4" and is using it. There is a 10" home built Dobsonian available to be donated to the club if the club is interested.

New Business:

No new business was discussed.

Visitors/New Members:

No visitors introduced themselves. There were a total of about 14 people present for the meeting.

Observing Reports:

International Observe the Moon Night (IOMN): About 120 people were at the Smolen Observatory at SUNY New Paltz.

Comet ISON: It is currently near Regulus at about magnitude 10. It's tail may cause a meteor shower on about January 14, 2014. There is an interesting animation of its orbit at www.solarsystemscope.com/ISON.

The observations of the Jupiter triple transit was clouded out locally.

Willie showed some pictures of member Dave Rossetter's recent wedding.

The meeting was adjourned at 7:54 PM.

The program that followed was a talk by Al Nagler, founder of Televue, titled "Giant Eyepieces that Swallow Spacecraft".

Submitted by James Rockrohr, November 17, 2013.

From the President:

Election Time

Over the past year I have had the privilege of serving as the president of the MHAA. The basic duties are simple: Preside over the meetings, make the weather call on the star parties, and occasionally speak for the club. I have used the presidency to do a number of things, not that the office gives me any power, but it does give me the motivation to pursue them. Some of the things I have done:

- * Participated in most of the outreach events the club has sponsored. We have done considerable outreach this year, thanks to the work of our Outreach Coordinator, Candace Wall, and Joe Macagne who has been active in establishing our partnership with Olana Historic Site. Paul Granich, Ken Bailey, and probably others whom I have forgotten who have also organized activities.
- * Added Solar Astronomy to our outreach activities. The Charlie Bates Solar Astronomy Outreach Club has been a valuable resource.
- * Obtained large quantities of outreach/educational materials from NEAF vendors.
- * As a result of our outreach activities, we have received several monetary donations to the club from other organizations.
- * Continued our liaison with SUNY New Paltz by being involved with the Astronomy Department, the Kirk Planetarium, and the Smolen Observatory.

- * Maintained our calendar with the Night Sky Network. As a result we have received two of their instructional toolkits, and will probably be able to give out NSN awards next year. I received a Certificate of Appreciation from NSN, NASA, and AOS for my work.
- * Assisted with maintaining our events listing on the Meetup group. Many others have helped with this.
- * Tracked down and started an inventory of the club's telescopes. Karl Loatman was able to restore the 13" Dob to working order, and is now in the possession of a member. We have also received another telescope donation this year which is available.
- * Assisted Vice-President Joe Macagne with obtaining speakers for the monthly meetings. Being a member of other local clubs (Rockland and AOS) gives me some good leads on outside speakers.
- * Written a monthly column for the MHAA newsletter, ably composed and edited by Rick Versace.

A List of Club Assets

Library - with Ken Bailey

MHAA Banner and frame – Rick (I don't have the frame)

13" Dob - Jack Chastain

8" Dob - gone to college, not coming back?

8" Dynamax SCT- Willie Yee has. AVAILABLE

4" Tasco Newtonian - Paul Chauvet

Educational materials, magazines, handouts - Willie

As of 14 Nov 2013



The most volcanically active place is out-of-this-world!

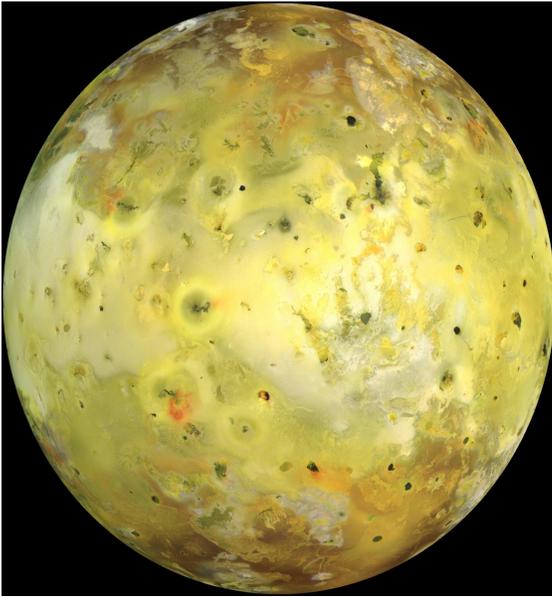
By Dr. Ethan Siegel

Volcanoes are some of the most powerful and destructive natural phenomena, yet they're a vital part of shaping the planetary landscape of worlds small and large. Here on Earth, the largest of the rocky bodies in our Solar System, there's a tremendous source of heat coming from our planet's interior, from a mix of gravitational contraction and heavy, radioactive elements decaying. Our planet consistently outputs a tremendous amount of energy from this process, nearly three times the global power production from all sources of fuel. Because the surface-area-to-mass ratio of our planet (like all large rocky worlds) is small, that energy has a hard time escaping, building-up and releasing sporadically in catastrophic events: volcanoes and earthquakes!

Yet volcanoes occur on worlds that you might never expect, like the tiny moon Io, orbiting Jupiter. With just 1.5% the mass of Earth despite being more than one quarter of the Earth's diameter, Io seems like an unlikely candidate for volcanoes, as 4.5 billion years is more than enough time for it to have cooled and become stable. Yet Io is anything but stable, as an abundance of volcanic eruptions were predicted before we ever got a chance to view it up close. When the Voyager 1 spacecraft visited, it

found no impact craters on Io, but instead hundreds of volcanic calderas, including actual eruptions with plumes 300 kilometers high! Subsequently, Voyager 2, Galileo, and a myriad of telescope observations found that these eruptions change rapidly on Io's surface.

Where does the energy for all this come from? From the combined tidal forces exerted by Jupiter and the outer Jovian moons.



On Earth, the gravity from the Sun and Moon causes the ocean tides to raise-and-lower by one-to-two meters, on average, far too small to cause any heating. Io has no oceans, yet the tidal forces acting on it cause the world itself to stretch and bend by an astonishing **100 meters** at a time! This causes not only cracking and fissures, but also heats up the interior of the planet, the same way that rapidly bending a piece of metal back-and-forth causes it to heat up internally. When a path to the surface opens up, that internal heat escapes through quiescent lava flows and catastrophic volcanic eruptions! The hottest spots on Io's surface reach 1,200 °C (2,000 °F); compared to the average surface temperature of 110 Kelvin (-163 °C / -261 °F), Io is home to the most extreme temperature differences from location-to-location outside of the Sun.

Just by orbiting where it does, Io gets distorted, heats up, and erupts, making it the most volcanically active world in the entire Solar System! Other moons around gas giants have spectacular eruptions, too (like Enceladus around Saturn), but no world has its surface shaped by volcanic activity quite like Jupiter's innermost moon, Io!

Io. Image credit: NASA / JPL-Caltech, via the Galileo spacecraft.

Download photo here: <http://photojournal.jpl.nasa.gov/catalog/PIA02308>

Learn more about Galileo's mission to Jupiter: <http://solarsystem.nasa.gov/galileo/>.

Kids can explore the many volcanoes of our solar system using the Space Place's Space Volcano Explorer: <http://spaceplace.nasa.gov/volcanoes>.

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. Call the Club Hotline for updated information. Everyone should meet at the gate at the scheduled time. The gate will be closed after that time.

- ♦ 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.