



Mid-Hudson Astronomical Association

February, 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, January 15, 2013

The meeting was called to order at 7:32 PM by President Willie Yee in the auditorium at the Coykendall Science Building at SUNY, New Paltz, NY. There were approximately 17 people in attendance at the beginning of the meeting.

The minutes of the previous meeting as published in the last newsletter were approved after a discussion to include Chris Kendall's name as the speaker at the November meeting.

Willie asked if there were visitors and Dean Goddard introduced himself.

Officer's Reports:

Membership: Jim Rockrohr, filling in for Caryn Sobel, reported that 13 renewals were received since the last meeting making for a total of 15 paid memberships for 2013, so far. The membership was reminded that membership renewals are due in January for all members. Please submit your \$25 annual renewal as soon as possible.

Treasurer: Ken Bailey gave his report as published in the most recent newsletter with a current balance of \$2954.13.

Outreach: Olana has requested that we provide 'scopes and speakers for an Astronomy Walk night. During the discussion, the suggested dates were February 9th with a backup of February 16th. Ken B., Paul G., Steve C., and Joe M., volunteered to bring telescopes. A speaker is still needed. Candace will put information on the Meetup site, when available.

Publicity: Paul Chauvet discussed publicity for our presence at the Grey Fox festival, our Facebook page, and our listing on the NASA Night Sky Network web site.

Webmaster: Sean Dague was not present.

Upcoming programs: Willie reported the following list:

- February will be Eric Meyers - "Peppercorn Solar System",
- March will be a demo of the new Planetarium projector by Raj Pandya,
- April will be Bob Berman - "20 Amazing Secrets of Celestial Motion"
- May will be Steven Bellavia – "Large Synoptic Survey Telescope"

Willie also announced that Joe Macagne has agreed to take the position of Vice President for 2013. A motion was made, seconded and passed unanimously to elect Joe as Vice President. Thanks, Joe!

Old Business:

T-Shirts: Ken Bailey reported that we need more orders to get enough to place the order with the shop. After discussion, it was agreed that the club should order enough tee shirts and sweat shirts to meet the minimum order size. Ken will place the orders.

The club's 4 inch telescope: Paul Chauvet agreed to take the 'scope for a time and use it. A suggestion was made to give Chris Kendall a free membership for this year since he donated his speaker honorarium back to the club. A motion was made by Paul Granich, seconded by Paul Chauvet, and passed unanimously.

Winter Dinner: Joe Macagne is working with Casa Mia in Highland on the annual winter dinner. We agreed that February 23rd would be a good date. Joe will provide more details when available. Ken Bailey moved that the tentative 2013 Star Party schedule proposed by email be accepted. It was seconded and approved unanimously. These dates will be added to the meetup site.

Ken Bailey also reported that he has renewed our liability insurance for this year and has removed all sites except for SUNY New Paltz, Lake Taghkanic State Park, Vassar Farms, and the Gardiner site.

New Business:

There was an extended discussion about the experience at the last Star Party at Lake Taghkanic State Park. The key points were:

- The NYS Park Police asked to see our permit. The two people present did not have a copy.
- The issue was finally resolved when Paul G. was able to get Sean D. on the phone and he talked to the police officer.
- Ken talked to the park representative later and confirmed that we are not required to have the permit with us, but all agreed it would be a good idea.
- We also need to be sure to contact the park when we decide to postpone our Star Party from Friday to Saturday night so they can inform the police agencies. (The police were not aware that we had changed our party to Saturday.)
- It was mentioned that the club bylaws require there to be at least 2 club officers at all official club events.
 - It was suggested that this be amended to also include past officers.
- It was suggested that all officers have a copy of the park permit. Sean will be contacted to send a PDF copy to all officers.
- Ken mentioned that he always has a copy of the license plate list with him when he attends a star party.

Willie announced that there will be the annual shopping trip and lunch at Highpoint on January 26th. He has confirmed the date with the store.

The meeting was adjourned at 8:20 PM.



Tackling the Really BIG Questions

By Diane K. Fisher

How does NASA get its ideas for new astronomy and astrophysics missions? It starts with a Decadal Survey by the National Research Council, sponsored by NASA, the National Science Foundation, and the Department of Energy. The last one, *New Worlds, New Horizons in Astronomy and Astrophysics* was completed in 2010. It defines the highest-priority research activities in the next decade for astronomy and astrophysics that will “set the nation firmly on the path to answering profound questions about the cosmos.” It defines space- and ground-based research activities in the large, midsize, and small budget categories.

The recommended activities are meant to advance three science objectives:

1. Deepening understanding of how the first stars, galaxies, and black holes formed,
2. Locating the closest habitable Earth-like planets beyond the solar system for detailed study, and
3. Using astronomical measurements to unravel the mysteries of gravity and probe fundamental physics.

For the 2012-2021 period, the highest-priority large mission recommended is the Wide-field Infrared Survey Telescope (WFIRST). It would orbit the second Lagrange point and perform wide-field imaging and slitless spectroscopic surveys of the near-infrared sky for the community. It would settle essential questions in both exoplanet and dark energy research and would advance topics ranging from galaxy evolution to the study of objects within the galaxy and within the solar system.



Clusters of galaxies collide in this composite image of “Pandora’s Cluster.” Data (in red) from NASA’s Chandra X-ray Observatory show gas with temperatures of millions of degrees. Blue maps the total mass concentration (mostly dark matter) based on data

Naturally, NASA’s strategic response to the recommendations in the decadal survey must take budget constraints and uncertainties into account.

The goal is to begin building this mission in 2017, after the launch of the James Webb Space Telescope. But this timeframe is not assured. Alternatively, a different, less ambitious mission that also address the Decadal Survey science objectives for WFIRST would remain a high priority.

The Astrophysics Division is also doing studies of moderate-sized missions, including: gravitational wave mission concepts that would advance some or all of the science objectives of the Laser Interferometer Space Antenna (LISA), but at lower cost; X-ray mission concepts to advance the science objectives of the International X-ray Observatory (IXO), but at lower cost; and mission concept studies of probe-class missions to advance the science of a planet characterization and imaging mission.

For a summary of NASA’s plans for seeking answers to the big astrophysics questions and to read the complete Astrophysics Implementation Plan (dated December 2012), see <http://science.nasa.gov/astrophysics/>. For kids, find lots of astrophysics fun facts and games on The Space Place, <http://spaceplace.nasa.gov/menu/space/>.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Upcoming Speakers for 2013

January

Video – Big, Bigger, Biggest Telescopes

February

Eric Myers - Peppercorn Model of The Solar System

The peppercorn model is a scale model of the solar system which can demonstrate at the same time both the sizes of the planets and the distances between them. In the peppercorn model the Earth is roughly the size of a peppercorn placed about 26 yards from a bowling ball representing the Sun, and Pluto is a pin point about 1000 yards away. I'll show that the model fits well on both the SUNY New Paltz campus and on the Dutchess Rail Trail, and discuss other possible locations. I'll contrast the model used as an event versus a permanent installation, and discuss ways the club might promote the use of the model.

Eric Myers is a physicist trained in high energy physics and cosmology and interested in astronomy. This year he is a visiting assistant professor of physics at SUNY New Paltz. He received his Ph.D. from Yale University and went on to do research at Brookhaven National Lab, Boston University, and the University of Texas. He has taught at the University of Michigan, Vassar College, and Marist College. He has given a talk to the club before, in January of 2009, about the prospects of detecting gravitational waves using data from LIGO and the distributed computing project known as Einstein@Home.

March

Raj Pandya – Smolen Planetarium's Digital Projector

April

Bob Berman - Twenty Amazing Secrets of Celestial Motion

May

Steve Bellavia - The LSST Camera: The heart and soul of the next generation survey telescope

TBA

Sue French – A few of My Favorite Things

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.