



Mid-Hudson Astronomical Association

April, 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, March 17, 2015

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

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 not present. See his report in the newsletter.

Treasurer's Report for the month of March, 2015

Date: 18 April, 2015

Bank Balance:	\$1780.65
Outstanding Checks:	\$ 100.00
Outstanding Deposits:	\$ 107.94
Ending Bank Balance:	\$1788.59
Checkbook Balance:	\$1788.59
Balance with Bank:	Yes

Ending balance total: \$1788.59

Notes: Outstanding check is a speaker's honorarium. Outstanding deposits are from payments for memberships and t-shirt sales at the April Star Party.

Respectfully submitted: Ken Bailey
Treasurer

Outreach: Candace Wall reported on upcoming events:

- **Dutchess County Science Fair:** March 21 – (No one has volunteered to judge. See Steve Carey if interested.)
- **High Meadow School:** March 27 – Rick Versace coordinating.
- **Earth Day:** April 26 – Huguenot Church in New Paltz, Willie Yee coordinating; daytime solar viewing. Could use help with crowd control.
- **Rhinebeck Relay for Life (American Cancer Society):** May 30-31 at Dutchess County Fairgrounds. Candace is coordinating and has a team set up for MHAA if you would like to attend. There is no cost. We can go on 5/29 to reconnoiter the area. Eric Myers will set up the Solar System Model.

Publicity: Paul Chauvet was not present.

Webmaster: Paul Chauvet was not present.

Upcoming programs: Candace Wall:

- Tarun Biswas in April.
- Need speakers for June and November.

Old Business:

- Club telescopes and resources:
 - o 13 inch dob mirror to be recoated. Jack Chastain still working on arranging it.
 - o 100 mm Celestron AP is available; see Willie.
 - o 8" SCT with table top mount is available for member use. See Willie.
 - o Full asset list is posted on the website.
- Pins are available; \$5 members, \$8 non-members. See Willie.

New Business:

- Discussion on fund raising – Joe Macagne.
- Reminder: NEAF April 18-19 at Rockland Community College in Suffern.

Visitors/New Members:

1 new visitor introduced themselves. There was a total of about 17 people in attendance.

Observing Reports:

- Possible Aurora tonight due to solar storm.

The meeting was adjourned at 7:45 PM. Next meeting is on April 21st.

The program that followed was "Eureka! Discovering Your Inner Scientist" by Chad Orzel, Associate Professor of Physics at Union College.

Submitted by James Rockrohr, April 16, 2015.

From the President:

Note from the editor: I didn't realize until I was putting the newsletter together tonight that the final draft the Willie sent me was in pdf format. Please see the additional attachment to this month's email.

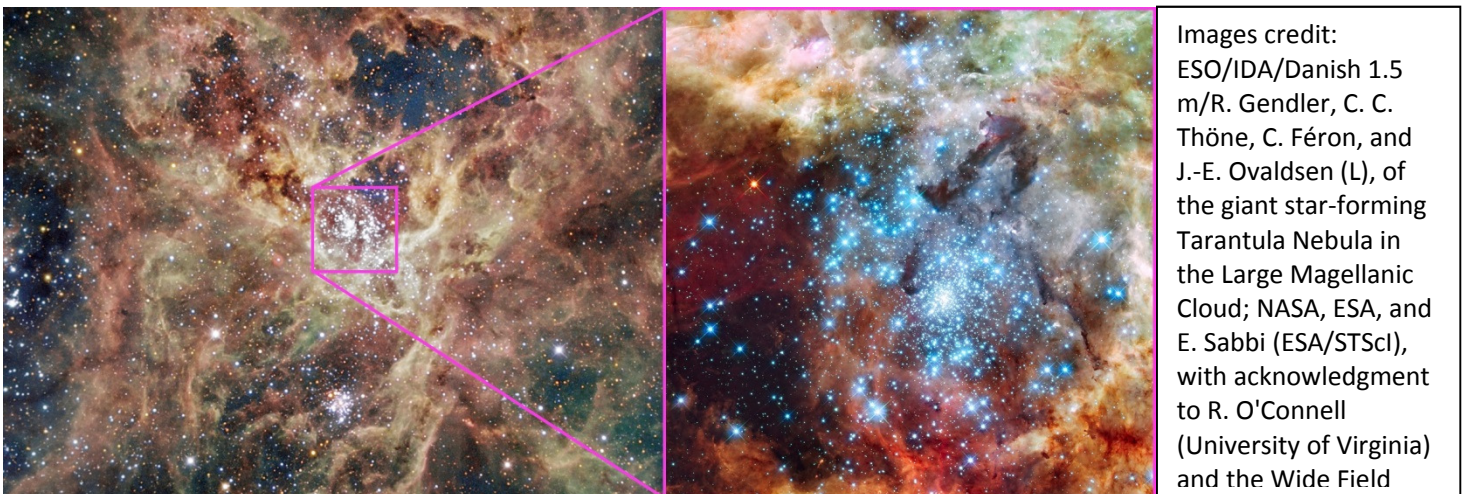


Is the Most Massive Star Still Alive?

By Dr. Ethan Siegel

The brilliant specks of light twinkling in the night sky, with more and more visible under darker skies and with larger telescope apertures, each have their own story to tell. In general, a star's color correlates very well with its mass and its total lifetime, with the bluest stars representing the hottest, most massive and *shortest-lived* stars in the universe. Even though they contain the most fuel overall, their cores achieve incredibly high temperatures, meaning they burn through their fuel the fastest, in only a few million years instead of roughly ten billion like our sun.

Because of this, it's only the youngest of all star clusters that contain the hottest, bluest stars, and so if we want to find the most massive stars in the universe, we have to look to the largest regions of space that are actively forming them right now. In our local group of galaxies, that region doesn't belong to the giants, the Milky Way or Andromeda, but to the Large Magellanic Cloud (LMC), a small, satellite galaxy (and fourth-largest in the local group) located 170,000 light years distant.



Images credit:
ESO/IDA/Danish 1.5 m/R. Gendler, C. C. Thöne, C. Féron, and J.-E. Ovaldsen (L), of the giant star-forming Tarantula Nebula in the Large Magellanic Cloud; NASA, ESA, and E. Sabbi (ESA/STScI), with acknowledgment to R. O'Connell (University of Virginia) and the Wide Field

Despite containing only one percent of the mass of our galaxy, the LMC contains the Tarantula Nebula (30 Doradus), a star-forming nebula approximately 1,000 light years in size, or roughly seven percent of the galaxy itself. You'll have to be south of the Tropic of Cancer to observe it, but if you can locate it, its center contains the super star cluster NGC 2070, holding more than 500,000 unique stars, including many hundreds of spectacular, bright blue ones. With a maximum age of two million years, the stars in this cluster are some of the youngest and most massive ever found.

At the center of NGC 2070 is a very compact concentration of stars known as R136, which is responsible for most of the light illuminating the entire Tarantula Nebula. Consisting of no less than 72 O-class and Wolf-Rayet stars within just 20 arc seconds of one another, the most massive is R136a1, with 260 times the sun's mass and a luminosity that outshines us by a factor of *seven million*. Since the light has to travel 170,000 light years to reach us, it's quite possible that this star has already died in a spectacular supernova, and might not even exist any longer! The next time you get a good glimpse of the southern skies, look for the most massive star in the universe, and ponder that it might not even still be alive.

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.