

First Light Lite

June, 2019

Jim Lynch - Editor

April might have been quiet, but May sure wasn't.

The month kicked off with a STEM event, "STEM Journey VI", held May 4th at Sandwich High School. CCAS had a booth at that event, manned by Jim Lynch and Beth Nickerson. We gave out lots of our new flyers, and had our banner displayed prominently. The gas tube and plastic diffraction grating display of spectral emission lines was a big hit, with the laptop display of our astro-photographs coming in second. We had a number of people leave their emails for First Light Lite (HELLO to you!), and many people expressed interest in our star parties. It was a great event overall, lots of fun, and also showed us that we need to do more such outreach.

In a repeat of April, we had one good clear night for our star parties, which given how wet this Spring has been, was not so bad. We will be going to our "three per month" star party schedule in June, which should be a bit better. We always need a few more volunteers for the star parties, and the weather will be warmer, we promise. (That 23 ½ degree tilt thing really works!) Our first star party in June, on June 8th, will be attended by the Bourne Newcomers Club, so we can especially use a few more members to help welcome this larger group.

The new 12 ½" PlaneWave telescope, as of this writing (5/29/19) is in boxes in the dome, and is set to be installed on June 3rd. In the interim, a 14" Celestron scope was set up, so that star party visitors could get a good view from inside the dome. That 14" scope is now set to be deployed routinely on a pier mount just outside the dome. Together with the 18" Dobsonian scope, CCAS now has some good-sized scopes to show visitors details of popular sky targets. The CCAF board members initially planned a special celebration event for the new scope in mid-June, but that probably will be a bit delayed. More to follow...

A good version of our "projects" initiative has now been completed, and will be attached to the same email as this newsletter. The idea is to have our club

members (and other interested parties) sign onto some “hands-on” projects, akin to the projects given to the DYHS students. This will allow people to get involved (if not already) with some real observational astronomy. These projects would be done by small groups, pitched at a level commensurate with amateur astronomy, and include at least one experienced member to help each group.

Since our June speaker had to cancel due to a travel conflict, I (JFL) will be discussing in detail what each of these projects needs as the “lecture” portion of the meeting. I am also asking people if they would send to me their first three choices of projects that they might like to try (at jlynch@who.edu) by the end of June, so that we can try to form some working groups by the end of summer, latest. This is a new initiative, and we’ll see how it works out, but I hope people are willing to at least give some of these projects a try!

Lastly, let me add a plug, even before the usual FLL section on speakers, for the July and August speakers.

On July 11th, and NOT July 4th which is the usual First Thursday, Dr. Larry Marschall of Gettysburg College will be talking about the New Horizons mission, and the views it provided of KBO’s Pluto and 2014 MU69. This was a very hot news item during the last year, and Larry always gives great talks!

Also, last month I talked up the book “Einstein’s Monsters” by Chris Impey, which gives a very nice history of the VLBI (very long baseline interferometry) project to image a black hole. Another one of our favorite speakers, Dr. Tony Stark of HSCfA, was part of the South Pole Telescope group that manned that key instrument in the global VLBI array. He happily surprised me with an email saying that he would like to give a talk on that topic in August. (He also noted he was one of the *370 authors* on the paper that reported the now famous image.)

So, we will have two of our best guest speakers talk about what were probably two of the hottest topics in astronomy over the last year! All I can say is “be there!!!!”

Upcoming Speakers and Topics

June – Dr. Jim Lynch (CCAS) will use the hour to discuss the proposed “observational projects” initiative. (See attachment.)

July (11th, not 4th!!!!!!)

Dr. Larry Marschall, Gettysburg College.

“ON BEYOND PLUTO”

Abstract: On New Year's Day, 2019, the New Horizons Spacecraft achieved a rendezvous with 2014 MU69, the most distant object in our solar system ever visited by a spacecraft. Three and a half years earlier, in July 2015, New Horizons made its closest approach to Pluto, sending back striking and informative closeup views of that distant dwarf planet. 2014 MU69 lies beyond Pluto, in a region of our solar system called the Kuiper Belt, and because of its immense distance, practically nothing is known about it. In this presentation, we will show some of the first glimpses of this previously unexplored region of space. Based on our experience with New Horizon's first views of Pluto, we expected many surprises, and there were----but there were also some remarkable confirmations of predictions. We'll discuss these both---data is still coming down from the distant spacecraft, and it won't all be downloaded until next year.

August 1st

Dr. Antony Stark, HSCfA

"Imaging Black Holes"

Last Month's Speaker

Mr. Jim Mitchell and DYHS Student Mentors – DYHS Astronomy Honors Program

We try, in spring of each year, to have a review of the individual DYHS student astronomy honors projects that were done in the previous fall semester. Usually Mr. Jim Mitchell gives an overview of the astronomy honors program, followed by the student talks (with the CCAS advisors cheering from the

sidelines.) This year, the students were shy about coming, and so Jim Mitchell gave a more complete review of the entire one-year long Earth Sciences curriculum at DYHS, and not just the astronomy component. This was very well received by the audience, and Jim also got to show off his background as a trained geologist! This was followed by the mentors talking about the projects they supervised, with an emphasis on the strengths and weaknesses of the projects.

May Meeting Minutes and CCAS Business

The past few business meetings have pretty much played the same tunes. To repeat:

We discussed the status of our main observatory telescope replacement. We guesstimated two months overall for the new scope to be installed, and noted that we will be training a core of people on the computer software needed to use it. (Update is June 3 for installation.)

Jim Lynch further discussed the “projects” idea with the members.

Jim Lynch also discussed pursuing membership more aggressively this year. We have made some progress with this initiative, but there is much more to be done.

Star Parties

From September until mid-June, we will have two regularly scheduled Star Parties each month taking place at 7:30 -10:30pm on the *Saturday* closest to the date of First Quarter Moon (about 7 days old). This is an increase from our old schedule of one per month in the fall, winter, and spring.

From mid-June through August, we have three regularly scheduled Star Parties each month taking place on *Thursdays* at 8:30-10:30pm.

When the moon is near its First Quarter, the terminator (the line dividing light from dark) is favorable for viewing sunlight or shadow on the sides of craters. This time is also favorable for observing the dark side of the moon occult (visually cover) stars in the sky as the moon moves in its orbit. Depending upon the calendar, we may also be able to observe planets and other celestial objects.

Here is the schedule for spring “Star Parties” up to August, 2019; **the public is cordially invited:**

June 8th, 13th and 27th (note change from 15th in last newsletter)

July 18th and 25th (only two due to meeting and 4th of July conflicts)

POSSIBLE CANCELLATIONS for Star Parties: Cancellations will be very rare since we have lots to do "inside" as well as outside. Even if the forecast is "iffy"; the Staff Leader for the night may elect not to cancel in spite of possible clouds. If clouds arrive after staff and guests have convened, a virtual Star Party will usually take place indoors to include overviews of the sky for that night using computer simulations with our big screen TV, videos of interesting sky events recorded previously, demonstrations and/or training on the use of scopes and other equipment, and consultation/discussions on things astronomical, etc.

However, sometimes a solid forecast for overcast or rain or a storm will result in cancellation of a given Star Party. **IF IN DOUBT ABOUT THE WEATHER AND THE STATUS OF A STAR PARTY, CALL THE OBSERVATORY AT 508-398-4765 AFTER 7:45 pm.** No answer means the event has been cancelled.

Directions to Dennis Yarmouth HS and Schmidt Observatory

For information on the location of our Dome behind Dennis-Yarmouth High School, click on the purple button "Old Website" and once there, click on "Meeting Location" viewing the two maps that are there: external for the Dome, and internal to locate the high school library where meetings are held.

For meetings, drive in the south entrance road and go around behind the main building. Park in the lot about half way down the building and go in the back door and turn down the hall to your left to find the library.

For Star Parties at the Dome, drive in the north entrance road all the way past the north side of the main high school building, through a gate, and on to park near our Dome.

H&K directions

Please be reminded that Gus Romano or his delegate “host” a Dutch-treat dinner gathering for members and friends each CCAS meeting night (before the meeting) at the South Yarmouth Hearth & Kettle restaurant at 5:45pm; (the meetings begin

at 7:30 at D-Y.) The speaker for each meeting is always invited. Please join the group to dine and talk about all things interesting, including astronomy, each month before our meeting. The H&K is at 1196 Rt 28, South Yarmouth, about a half mile west of the Station Avenue/Main Street intersection with Rt 28 (stop light).