

First Light Lite

August 1st, 2018

Jim Lynch - Editor

Summer is now almost 2/3 gone! But it is going by gracefully, and July featured both our usual meeting and a full complement of three star parties. The first and third were "weather challenged," but the third featured probably the clearest skies we'll see on Cape Cod all summer.

One note I made at the last star party is that we need a bit more in the way of "rainy day" activities and shows for the public on those (not infrequent) Cape Cod days when the weather is not conducive to astronomical observation. I have some ideas that I will pass by the club at the meeting Thursday.

We also need to finalize plans for our September "Day of Astronomy" program soon if we are going to do it. I will put up straw man dates and activities for people to vote on at the meeting.

Dues are due in August. Though checks are preferred, Mike Hunter will probably take anything that he get - Bitcoin, Chinese Yuan, IOU's, whatever! ☺

August 2 CCAS Seminar *Speakers* !!

Dr. Anastasia Fialkov, HSCfA

Title: "Mysterious Fast Radio Bursts"

Abstract: Recently discovered in archival pulsar survey data (Lorimer et al. 2007), Fast Radio Bursts (FRBs) are a new astrophysical phenomenon of unknown origin. FRBs are short (few milliseconds) and highly energetic bursts of radio waves. From the 35 published events we estimate that FRBs occur roughly 1000 times per sky per day. Properties of the observed events indicate that they are extragalactic and, possibly, originate at large cosmological distances. However, the nature of these bursts remains a mystery. In my talk I will review properties of FRBs and highlight efforts to find new sources.

Dr. Marion Dierickx, HSCfA

Title: Galactic Collisions in the Local Group

Abstract: As the nearest galactic laboratory available for study, the Local Group harbors the faintest and most dark-matter dominated known galaxies. The sample of observed dwarf satellites surrounding the Milky Way and Andromeda is continually growing, and so is the list of diverse detected substructures in the outer reaches of our Galaxy's halo. Knowledge of our own cosmic backyard is especially critical to building up our understanding of the Universe at large. In this effort, simulations are our only access to the time axis, as they allow us to reconstruct past possible histories of the interplay between members of the Local Group. I will present new simulations of past collisions between two satellite galaxies in the Local Group with their more massive hosts: M32 with Andromeda and Sagittarius with the Milky Way. I will then discuss how these simulations help us rebuild the Local Group archaeological record.

Upcoming Speakers and Topics

September - CCAS Astrophotography. CCAS members.

October - Dr. Tony Stark, HSCfA. Cosmology topic TBA.

November - Dr. Martina Arndt, Bridgewater State. Solar Eclipses.

December - Dr. Jim Lynch, CCAS. The Solar System - Its Formation and Basic Dynamics.

Last Month's Speaker - Abstract

Dr. Jim Lynch, CCAS and WHOI

"Spectroscopy - Observational Basics, with a Live Demonstration"

CCAS now has some laboratory and solar observation capabilities in spectroscopy, specifically via the RSPEC commercial systems. I will show what these are using a gas discharge tube setup, diffraction gratings and the RSPEC

Explorer system (which is different from the RSPEC Star Analyzer eyepiece grating we've seen/used before.) Seeing the optical spectral lines of various elements live is both pretty and informative. (And seemed to be a big hit at the meeting!)

July Meeting Minutes and CCAS Business

Elections were held, results are: Jim Lynch, President, Ashish Dutta, Vice President, Mike Hunter, Treasurer, and Katie Sisson, Secretary.

Charlie Burke is the new director of WSO.

Our telescopes need more people to operate them. Anyone and everyone is welcome to learn. We have detailed cheat sheets that will help, and will schedule future training sessions.

We have finalized our work on a brochure, and will be sending it to a printer soon.

Again, yearly dues are due at the August meeting - \$30 (preferably by check, as mentioned).

Star Parties

From September thru June, we will have one regularly scheduled Star Party each month taking place at 8:30-10:30pm on the Saturday closest to the date of First Quarter Moon (about 7 days old).

From July through August, we will 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 summer “Star Parties” up to September, 2018; **the public is invited:**

August 9, 16, 23

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).