First Light Lite

January 1st, 2018

Jim Lynch, Mike Hunter, Gus Romano - Interim Editors

Communications Committee and Other Outreach Efforts

Quiet! Not a creature has been stirring, not even a mouse… On the bright side, Christine Lynch has been successful in getting ads for our meetings into many Cape news outlets, and that part of our effort is becoming routine. Also, Jim Lynch and Ed Swiniarski are set to contribute posters as needed.

And, as mentioned, Katie Sisson has chipped in some work on a Facebook page…to repeat her message on that:

https://www.facebook.com/Cape-Cod-Astronomical-Society-948442561984897/

"This is the bare bones of the Facebook Page. It will be up to me to enhance and create the site with pictures, information etc. We can discuss what may or may not be appropriate for this site at our next PR/advertising group conference call."

I (JFL) will note that Katie had a very nice FB announcement of Mike Hunter's December talk. We need to do this for each month's speaker on: 1) the FB page, 2) the web pages (which were a bit dated re speakers), and 3) in FLL (which has the most up to date info, as the current writer of FLL is in charge of arranging speakers.) This is a good topic for the January meeting discussions.

At this stage, we are probably good to just discuss any further outreach efforts at our regular meetings, rather than try to schedule more conference calls. The Communications Committee has produced some tangible and useful results, and we might just all help improve these incrementally as time goes on.

December CCAS Meeting Speaker

We'd like to thank Dr. Mike Hunter of CCAS for his talk: "A History of Science." A description of this talk can be found in our "meeting minutes" section below.

Upcoming Speakers and Topics

January - Mike Hunter and Joel Burnett will moderate a discussion of "A three part program for CCAS." It is: 1) open the CCAF strategic planning process to CCAS membership input [1hr], 2) kick off the CCAF equipment fund, and 3) obtain CCAS membership input on CCAS programs.

February - Dr. Kenneth Brink, CCAS. "How is the air? Atmospheres on planets"

March - Dr. Frank Primini, HSCfA. Micro lensing.

April - Dr. Anastasia Fialkov, HSCfA. Fast Radio Bursts.

May - TBD (need speaker)

June - Dr. Marion Dierickx, HSCfA. Galaxy Satellite Collisions.

July - Dr. Jim Lynch, CCAS. Spectroscopy - Basics, With a Live Demonstration.

NOTE: Larry Marschall and Jim Lynch will be repeating their "LIGO" and "Drake's Equation" talks at WHOI this spring, at dates TBD. You are invited to attend! Details forthcoming.

December CCAS Meeting minutes (Including Main Speaker talk precis)

Attendance: 14

The meeting was held at the Dennis-Yarmouth High School Library.

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Our speaker was Dr. Mike Hunter on the topic of: “A History of Science.”

Dr. Mike Hunter is a science specialist with a background in research design and statistics. Today Mike walked us through a brief history of some the people and ideas that influenced what science has become today. An excellent resource that he uses for this topic comes from John Gribbon: “A Brief History of

Science." This book will be available in our Werner Schmidt library for anyone who would like to check it out for personal use.

Over the years, many people have tried to define the idea of science. In Mike's professional opinion science has three aspects:

1. Definitions – to make sure everyone is clear on what is being discussed without misunderstanding

2. Observations and measurements – Science relies on the collection of data.

3. Replication – Results must be replicable. Not just by the same experimenter but by different people following the same rules to obtain the same results.

As Mike explains to us, science is inherently inductive. Essentially, inductive reasoning makes generalizations from observations. The hypothesis explains the pattern. On the other hand, deductive reasoning starts with generalizations (which may or may not be true) and uses logic to reach a conclusion. If the assumption is wrong, then the conclusion is wrong. Therefore, true science cannot prove anything. It only aims to explain the phenomenon that we see through inductive reasoning.

Who were some of the very first people in history to do science? One might think Aristotle of ancient Greece. Many histories will name Aristotle as one of the first scientists. His early work appeared to be systematic, but he ultimately failed to achieve real science because of his use of deductive reasoning. Archimedes, also of ancient Greece, was another strong contender of science. Frances Bacon, of medieval England, was the first to establish an inductive method demonstrated by his famous Baconian method. Robert Norman, also in medieval England, determined the angle of Earth's magnetic field lines, also demonstrating a type of protoscience. Around the same time in Italy, Galileo was coming very close to doing real science with his systematic observations of heavens. However, the first person to really demonstrate the application of true science was William Gilbert. Inspired by Robert Norman, Gilbert concluded from his experiments that the earth is a magnet with an iron core.

Another way of thinking about history's first scientists is to consider a question that can only be answered by implementing science. Mike proposes this question:

“Who was the first person to equate the morning and night stars.” Today we know that Venus rises in the East in the morning and reappears in the west in the evening. But, at some point in our history they were considered separate. Through a bit of research, Mike uncovers that Parmenides of Elea was the first to equate the two “stars” as being the same. Therefore, we can consider Parmenides to be one of the fist scientists.

The history of science is a difficult one to define. This is to say that if a scientist doesn’t publish his or her findings, no one will remember them or their work. History can also be skewed by political relations. For example, a monarchy that disagrees with certain ideas may block such information from ever becoming public. Though some of the hard work of our ancestors may have been lost, science continues to progress. We should celebrate those that have made lasting impressions, and encourage the development of new ideas.

Business:

The old CCAS website has now been archived. All information about the society can be found at our updated site: www.capecodastronomy.org.

A bid for the observatory bathroom came back at 300%. Therefore, we will try again in March/April to put up a new bid.

The topic of the mailing list was brought up. Efforts will be made to ensure that all new members are on the e-mail list so they can stay up to date on society events.

In order to keep our telescopes operational, we need people who are willing to care for and maintain them. Anyone who is interested in “adopting” a telescope can contact Joel Burnett for more information.

The meeting was adjourned at 9:15

Respectfully submitted,

Katie Sisson - Secretary

Star Parties

Winter season once per month "QUARTER MOON SATURDAY STAR PARTIES", **all open to the public**, begins September 23rd, 8:30-10:30PM.

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 or four 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 "Star Parties" through June, 2018; **the public is invited**:

Saturday, January 27th

Saturday, February 24th

Saturday, March 24th

Saturday, April 21st

Saturday, May 19th

Saturday, June 16th

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).