First Light Lite

Feb 2nd, 2026 (Happy Groundhog Day!)

Jim Lynch – Editor

Message from the CCAS President

If the newsletters have been a bit spotty the past two months, please forgive me. I've had a few health issues to deal with in December and January, which seems to come along with being a seventy-something on the further side of that decade. But, even if the reporting has been slow, CCAS and CCAF are rolling on, and we have some good things to discuss.

Outreach

Our star party events that we hoped to have with Dennis-Yarmouth HS and Falmouth HS did not occur before the ending of the fall term, but are being rescheduled for the winter/spring semester. These should be exciting, especially using the new Seestar smart telescopes that were donated by CCAF to the two high schools.

Our usual January Werner Schmidt Observatory (WSO) star party, scheduled for the week of January 12-17, was postponed due to weather, including some *very* cold weather and snow cover on the grounds around the Observatory. Our star party in February is scheduled for the New Moon period of February 16-20, and *hopefully* this will provide a decent weather window.

It would be good to note here that star parties, whether at WSO or remote, are outdoor events, and extremely cold weather (below 32 degrees) and/or snow and ice cover can pose a health hazard to the attendees. Someone slipping and falling on snow and ice in the dark is not something we'd wish to risk. Nor is exposure. Moreover, outdoor amateur equipment doesn't work well below ~30 degrees, even if you run it remotely from indoors. So, pocketing our pride some weeks makes sense. (We also deal with cloud cover, which is why we have gone to one-week windows for obtaining a good observing night. But cloud cover is not very hazardous - usually!)

Our speaker for January 8th, Dr. Keaton Bell, unfortunately had to be rescheduled and is now on the roster to speak later this spring on white dwarf asteroseismometry, specifically on May 7th. The write-up of his talk is included

below and should be quite interesting. The titles and abstracts for all our February through August speakers are posted below in this newsletter.

Upcoming Events and Requests

We have many, *many* requests from schools, libraries, and other organizations for our participation in educational, informational, and observing programs this winter and spring. If you are interested in helping us staff some of these events, please contact us via cca@capecodastronomy.org and we will provide you with further information. We *really* could use a few extra hands!

Happenings of Interest (some repetition from last month)

Part of amateur astronomy is learning about astronomy, both as a hobby and as an exciting field of research. Here are two possibilities emerging that our friends and members might find of interest, both free.

The first is a long-established course on amateur astronomy given by the Kalamazoo Astronomical Society. This began January 17th, and you can still get a spot. It is an excellent course for amateurs! The information is as below.

Kalamazoo Astronomical Society

Looking Up Since 1936

Hello, Astronomy Enthusiast!

The Kalamazoo Astronomical Society is pleased to announce that our now-world-famous Introduction to Amateur Astronomy lecture series will return in early 2026 as part of our 90th anniversary celebration. People new to the hobby of amateur astronomy are the target audience for this five-part series.

Here's the full schedule:

Date Topic Time (EST)

January 17th Our Place Among the Infinities 1 – 3 pm

January 31st Discovering the Night Sky 1 – 3 pm

February 14th Binocular Basics 1 – 3 pm

February 28th Telescope Tutorial 1 – 3 pm

March 14th The Art of Astrophotography 1 – 3 pm

The series will again be offered exclusively on Zoom. Admission is still FREE, but those interested in attending are asked to register through our website:

https://www.kasonline.org/amastro.html

Thank you for taking the time to read this invitation. We hope you do us the courtesy of passing it along to anyone else you think might be interested.

Clear skies!

— Richard S. Bell

KAS President

A second opportunity will be offered to all by CCAS later this year and is currently in the organizational stage. Peter Pilon and other CCAS members are forming an astrophotography group that will focus on using the new, inexpensive smart scopes as well as our dome telescope at the Werner Schmidt Observatory. He and other experienced members are planning to offer a course on that for members and friends. More details will be forthcoming in the near future, but if you're interested in astrophotography, please contact our Cape Cod Astronomy email [cca@capecodastronomy.org] and let us know.

Initiatives and Committees

We again wish to devote some time to committee structure and currently are looking at the following committees: Website, History, By-Laws and Organization, Advertising and Publicity, and Membership. These committees should not be overly strenuous as regards workload, and hopefully you might be interested in engaging in one if you have not done so already!

Speakers

This Month's Speaker: Dr. James Lynch, CCAS, WHOI, ASA

Title: “Cosmology – the large and small of it”

Date: Feb. 5, 2026

Place: Both at the DYHS library and on Zoom (speaker will be live)

BIO: Dr. James Lynch obtained his B.S. in Physics from the Stevens Institute of Technology in 1972 and his Ph.D. in Physics from the University of Texas at Austin in 1978. He currently holds the position of Senior Scientist Emeritus at the Woods Hole Oceanographic Institution. Dr. Lynch is a Fellow of the Acoustical Society of America (ASA), a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), former Editor-in-Chief of the IEEE Journal of Oceanic Engineering, and current Editor-in-Chief of the Journal of the Acoustical Society of America. He is recipient of the Walter Munk Award (2009), the Oceanic Engineering Society Emeritus Award (2019), and the ASA Gold Medal (2021). His primary hobby is amateur astronomy, and he is the current president of the Cape Cod Astronomical Society.

Abstract: Cosmology is the study of the universe on the largest scales – things like galaxies, clusters of galaxies, what the universe is made of, the Big Bang, and the eventual fate of the universe. And it is now a well-developed branch of science, with a very accurate model at its core, the so-called ΛCDM (Lambda Cold Dark Matter) model.

But it still contains many major mysteries. We don’t know what dark matter and dark energy are, which comprise 95% of the universe. Recent Hubble and James Webb Space Telescope observations show that large scale structures are forming earlier than our theory predicts. Even the “cosmological constant”, which is a leading contender for dark energy, seems to be changing over time.

Strangely, the explanation for these large-scale phenomena may lie in the very smallest scale of the universe, the Planck scale.

In my talk, I will discuss both the large and the small-scale aspects of cosmology. Maybe, as when in “Men in Black” Agent J asks Frankie, the alien pug dog, how the galaxy can be contained in a tiny orb on the cat’s collar (the “Bell of Orion”), the answer Frankie gives is the correct one. “You humans! When will you learn that size doesn’t matter? Just because something is important doesn’t mean it’s not very small.”

From what I’ve discovered so far, Frankie has it right. See if you agree!

March 5th Speaker: Dr. Tracy Becker, Southwest Research Institute (SWRI)

Topic: Europa Clipper UVS Observations of 3I/ATLAS.

April 2nd Speaker: Dr. Jacquelynne Milingo, Maria Mitchell Association

Topic: TBD

May 7th Speaker: Dr. Keaton Bell, CUNY NY

Topic: White Dwarf Asteroseismology

Date: May 7th, 7:30 PM

Place: Both at the DYHS library and on Zoom (speaker will be remote)

BIO: Assistant Professor Keaton Bell is an observational astronomer who studies the structures of white dwarf stars from their vibrations. Dr. Bell earned his PhD at the University of Texas at Austin, where he observed for over 200 nights on the 2.1-meter telescope at McDonald Observatory, and now he mostly works with video data of the entire sky collected by NASA's Transiting Exoplanet Survey Satellite (TESS). Dr. Bell worked as a postdoc at the Max Planck Institute for Solar System Research in Göttingen, Germany, and was an NSF Astronomy and Astrophysics Postdoctoral Fellow at the University of Washington before joining the faculty of the Queens College Physics Department of the City University of New York (CUNY) in 2022.

Abstract: Queens College astronomer Keaton Bell uses video recordings from space telescopes to measure vibrations of dead stars called white dwarfs. White dwarf stars are the glowing hot embers left over when most stars run out of nuclear fuel. Some white dwarfs vibrate spontaneously, revealing resonant frequencies of the stars that can be used to map their interior structures. This presentation will describe the physics of stellar vibrations by analogy with the physics of musical instruments, which Keaton teaches a course on at Queens College. We will discuss the importance of studying white dwarf stars and review how the QC White Dwarf Research Group studies their structures by interpreting video recordings of vibrating white dwarfs. This talk will explain some of the newest breakthroughs in the field of white dwarf asteroseismology.

June 5th Speaker: TBD

July 2nd Speaker: TBD

August 6th Speaker: Dr. Antony Stark, HSCfA

Topic: "The tensor-scalar relation at the start of the Big Bang."

Directions to Dennis Yarmouth HS and Werner 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 along the south entrance road and go around behind the main building. Park in the lot about halfway 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. You can (and should) park on the grass there.

Sea Dog restaurant directions (No longer H&K, which recently closed)

CCAS hosts a dinner gathering for the speaker (if available), members and friends on meeting nights (just before the meeting) at the Sea Dog restaurant at 5:30 - 5:45pm; (the meetings begin at 7:30 at D-Y.) Please join the group to dine and talk about all things interesting, especially astronomy, before our meeting. The Sea Dog restaurant is located at 23 White's Path in South Yarmouth. Its phone is 508-694-6020. Chris Lynch has called ahead to confirm this new venue (as the H&K closed recently.) **NOTE:** Since Covid, we have a mix of fully remote and hybrid in-person+ remote meetings. Check the newsletter and/or website to see what the format is each month! There are no dinners when the meeting is fully remote.