

First Light Lite

April 3, 2024 😊

Jim Lynch – Editor

Message from the CCAS President

March finally felt a bit more active for CCAS, despite the less than cheery weather pattern. We had an excellent speaker talk about solar physics for our February First Thursday talk, a fitting topic given the coming eclipse. And we did have our scheduled star party, thanks to a lucky break in the otherwise dismal weather. We also did a lot of outreach, as will be discussed below. So, not a bad month at all!

Star parties

We held our monthly star party on March 12th and it had some pretty good attendance. Despite things still being a bit cool and damp, folks braved the elements for a few hours and enjoyed seeing some of the winter's "star attractions." The Orion Nebula, the Pleiades, the Hyades, the Double Cluster, and Jupiter kept people interested and observing, followed by a very enjoyable presentation on astrophotography by Hank Ricci. Our main dome scope functioned marginally, perhaps due to dew on the camera when power was lost, and one of our crusades will be to get this spectacular but touchy scope to be a bit more reliable! It is very much like the "little girl who had a little curl in the middle of her forehead..." We need it to be better behaved! Towards that, we'd like to educate more people in its use this spring and summer. If you are interested in this and can spare some time being on a "learning curve," let us know via the cca@capecodastronomy.org website. We'll try to organize another learning session along the lines of the one that WSO Observatory Director Charlie Burke held earlier this year.

As an added attraction, we are still hoping to preview a new, easy to use telescope. At the January CCAS meeting, George Silvis showed us what the new ZWO Seestar smart telescope could do, which is impressive! He has committed to bringing this scope along to a star party and I think people will be wowed with both its user friendliness and its imaging capabilities. This might be a good scope for us to recommend to beginners (and even some non-beginners.)

Speakers

Last month we had Dr. Maria Kazachenko from the University of Colorado Boulder and the National Solar Observatory speak about “Living in the Golden Age of Solar Physics.” A fitting topic given the coming solar eclipse! This month, Jim Lynch will give a “CCAS Centric” talk about the state of CCAS and where we want to go, which hopefully will also generate some useful dialogue. See below for details about both talks. We still need to get speakers for May and beyond, and Charlie Burke, and others are working on it. Any suggestions welcome!

School interactions

Our biggest spring interaction with DYHS will be the day of the (partial on Cape Cod) solar eclipse, and we will have a “Sun Party” for the students from 2-4 PM. Unfortunately, this event occurs on a school day, and the students are still around doing after school activities. So, we will limit attendance to a small number of CCAS club members and school faculty and students. We hope people can get the (rather inexpensive) solar filter glasses needed to look at the eclipse, but unfortunately, we must restrict the WSO event.

Outreach

Last month, we did three very enjoyable outreach events. First, the Footes and Lynch’s did a lecture/star party at Chatham Bars Inn, which went well overall despite having to combat some bright lighting when looking west.

Next, the Lynch’s and Ashish Dutta participated in a STEAM fair at Falmouth HS, and met both students and teachers. We hope to solidify relations with those teachers so that we can interact with the HS more in the years to come. We have a large number of club members from the Upper Cape, and this would make such an interaction convenient.

Finally, Jim Lynch did a learning program talk for the Chatham Eldridge Library, which also went over quite well.

The only interaction we couldn’t get to was with the Sandwich Middle School, due to weather. We will rearrange the date for that and hopefully get a clear night!

There are also many other invitations we have, and if any members are interested and able to give talks on astronomy topics or small star parties, or help staff the event, again contact us at cca@capecodastronomy.org and we’ll help make arrangements.

Adopt a scope, learn it, document it.

Charlie Burke's idea to have individual members "adopt" a specific scope from the WSO inventory, and then learn its nuances and document them to make them generally useful, has taken off nicely. To date, members have adopted the C8, LX-200, Lunt Solar, 6" Meade, and 8" Dobsonian scopes. We are also compiling a list of qualified users of these small scopes (not just the above) so that we can staff our events adequately and not overuse a small number of people. Anyone interested in further developing this initiative should contact Charlie Burke or cca@capecodastronomy.org.

Division of labor for scopes and star parties, docent material

As mentioned last month, we'd like to get more members trained in using not just the large scope, but also the Dobsonians, Go-To Scopes, and Binoculars. This is not only for the enjoyment of our members, but also to have enough people who can use these instruments at our monthly star parties. Users of each type of equipment should also learn what some popular sky targets are for them during each season. Towards this latter goal, Brian Twohig is putting together some "docent notes" which he will distribute when he has finished them.

Technical Projects for the club/schools

As also mentioned in prior months, many of our club members are looking for astronomy-related technical projects which can be done either individually or as a team. Some of the possibilities mentioned to date have been: 1) a radio telescope project, 2) displaying the spectral classes of stars using RSPEC, 3) measuring the full set of lunar orbital parameters, 4) a photo gallery of deep sky objects using the main telescope, and 5) an analemma. Also, we've been informally chatting about doing such longer term projects in league with the DYHS students. As always, any further ideas are welcome!

Contributed Newsletter Articles

As we have become more active post-Covid with in-person activities, there are more things to relate that would be of interest to each other. If people would like to submit brief (1-2 paragraph) articles for the newsletter about such activities or events, the newsletter editor would be more than happy to include them. This

would be subject to editing, and pictures of people are discouraged, as permission rules have become rather strict of late.

Dues

This year, as we are resuming activities, we are requesting dues at a reduced flat rate of \$15 per family (or individual, if there is no family to consider. Also, dues are waived for any students.) Dues will be due July 1st. If you have sent our treasurer (Dr. Ken Brink) dues in the last year, you will be considered to have paid dues for this year. If not, we would ask you to submit them, as this money is used to support our activities with the schools and the public. (We don't buy equipment, as that is the Foundation's function.) Dues should be sent to: Dr. Ken Brink, 16 Greengate Rd., Falmouth, MA 02540. If you send your dues to the Observatory or DYHS, they will be delayed in their transmission to the CCAS Secretary.

I'd note that most CCAS activities will be available to those who do not pay dues, but when we eventually have club observing events, those might be restricted to those who are dues paying members. Also, we plan to make our surplus and donated equipment available to members at a reduced rate. It is a small amount, and it is hoped you can pay if you wish to be active in CCAS.

Speakers

Last month's speaker: Dr. Maria Kazachenko, U. Colorado Boulder and NSO.

Title: "Living in the Golden Age of Solar Physics."

Bio: Maria Kazachenko is an assistant professor at the University of Colorado and the National Solar Observatory. She leads the Solar Magnetism research group and uses models and cutting-edge telescopes on the ground and in space to understand how eruptions on the Sun work. Originally from Eastern Europe, she became curious about the Sun after her first total solar eclipse in Hungary in 1999. She then earned degrees at Montana State University, Bozeman and then joined UC Berkeley as a scientist. She has more than 40 refereed publications and has been honored by prestigious awards including NASA Heliophysics Early Career Award, Robert Bartnik Fellowship in Australia, National Science Foundation CAREER Award and Brinson Award. Prof. Kazachenko has been involved in the development of the Critical Science Plan for the Inoue Solar Telescope, the largest solar telescope in the world, built on Maui in 2022. Her work has been funded by the National Science Foundation, NASA and private Brinson Foundation.

Prof. Kazachenko is also passionate about sharing the wonders of the Sun and space with the public. In October 2023 she led a group of scientists to do outreach in schools of Uvalde, TX for the annular solar eclipse. During the 2024 total solar eclipse Prof. Kazachenko will be coming back to Texas to lead outreach in schools of Eagle Pass and Del Rio, TX in English, and Spanish. Her home page is at <http://solarmuri.ssl.berkeley.edu/~kazachenko/> and her email is maria.kazachenko@colorado.edu

Abstract: Space weather is largely caused by the activity of our Sun. Invisible yet powerful magnetic fields, created within the Sun, determine when and where the next solar eruption will happen. Large solar storms can put our technological society at risk. In this talk, CU Boulder and National Solar Observatory Professor Maria Kazachenko will discuss how advances in solar telescopes allow scientists to understand the Sun in a lot more detail than ever before.

Precis: Professor Kazachenko was generous enough to share her PowerPoint slides with us, so I will just refer you to that very interesting attachment! Whether you heard her talk or not, these are worth giving a look! She also sent along a picture of a prediction of the coming eclipse that she and her colleagues made, shown below.

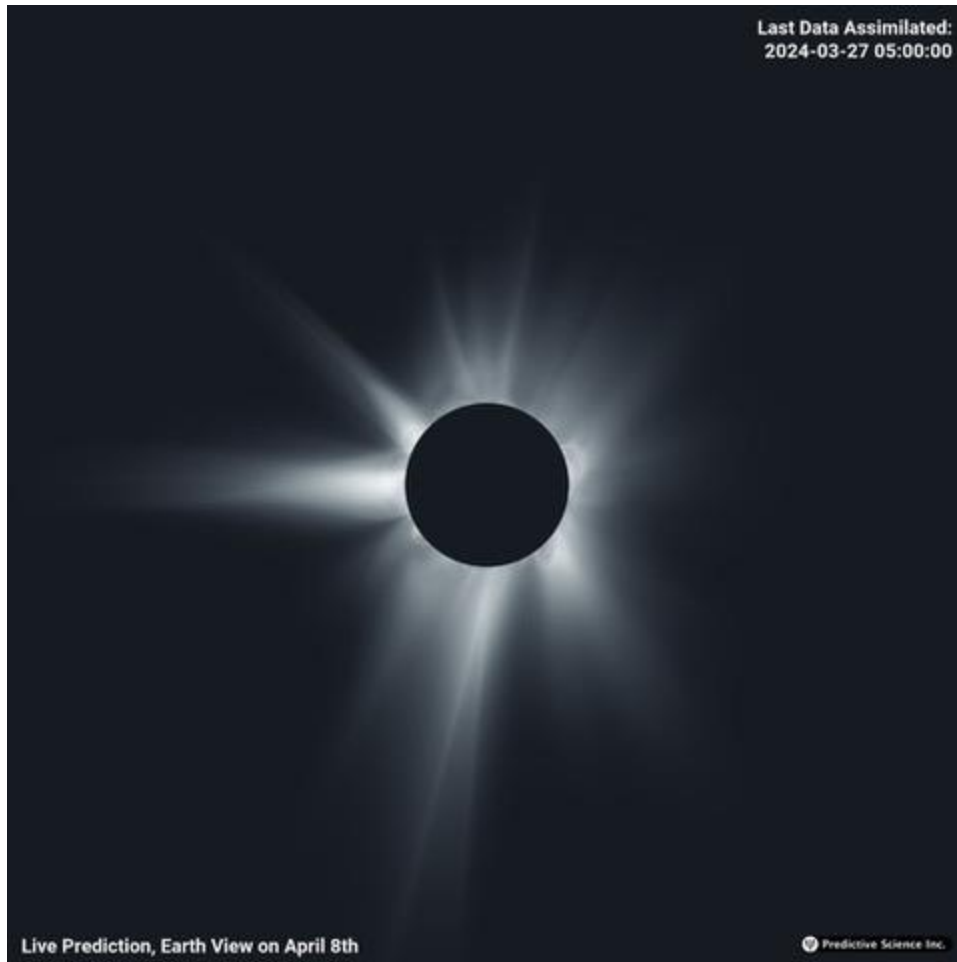


Fig 1. Solar Eclipse prediction courtesy Professor Kazachenko

Next Month's Speaker: Jim Lynch, CCAS

Title: Current Events and Status of CCAS – A Discussion

Abstract: Things go well for CCAS overall, but they can always be improved, and we would like our members, friends, Cape students and faculty, and the public to get the most benefit from our club possible. I will talk about the various facets of the club, its organization and activities, and also eagerly solicit input and suggestions from those who link in!

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. **NOTE:** We are redoing

the website, so that this information may become dated soon. We intend to move any currently useful information to our new website.

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.

H&K directions

CCAS hosts a dinner gathering for the speaker (if available), members and friends on meeting nights (just before the meeting) at the South Yarmouth Hearth & Kettle restaurant at 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 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). **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.