

First Light Lite

November 1, 2020

Jim Lynch – Editor

Message from the CCAS President

Yet again, I hope that all of you reading this are well and are staying as safe as possible during this pandemic.

While things have been understandably slow since March of this year, we can at least report a bit of progress over the past month. As mentioned before, we've halted our in-person activities until we can operate them safely, and gone to "virtual world" wherever we can. But, after negotiations defining the safety rules that need to be observed with the DY Regional School District, small crews of our senior members can now get back into Werner Schmidt Observatory (WSO). One crew was able to get in on a clear night about two weeks ago, and realigned the PlaneWave telescope, and refreshed its model of the sky, used for directing the scope to a target. We next plan to inventory our equipment, and start preparations for some webcam virtual star parties originating from the WS Observatory.

The latest status of our three main activities, i.e. lectures/meetings, star parties, and interactions with DYHS and other Cape schools is as follows:

Regarding lectures, we remain in good shape. We have some wonderful lectures lined up for our club (over GoToMeeting) this fall, and I will be describing last month's and the coming month's talks later in this letter.

As regards star parties, club member George Silvis has made his private observatory a star party Zoom broadcast site on an "as available" basis to people who sign up with him. If you are not yet part of this group and are interested, you can ask George for an invitation via me at jlynch@whoi.edu. The group is called "Mashnee Virtual Observers," and again we thank George for this individual effort. And, as I said above, we also will be working to have some virtual star parties from WSO in the not-too-distant future.

Regarding our educational/mentoring interaction with DYHS and other schools on the Cape, we plan to have some interactions via lectures, both club lectures and special ones tailored for the students. As regards projects, that is still under discussion.

Werner Schmidt

It is hoped that we can hold a memorial service for Werner Schmidt, who passed away in July, outside the WSO sometime soon. We are discussing this with Sandy Cashen and DYRSD.

Invitations to our virtual meetings; the future

To date, we have been inviting people to the CCAS virtual meetings (via providing a link and a password through email the morning of the meeting) using a recent members list, and also by creating a list of people on this FLL mailing list who have contacted me (at jlynch@whoi.edu) stating that they wanted to join the meetings. The offer to be put on our “meeting login list” remains open, and anyone who is interested, but has not received a previous invitation only needs to contact me and express interest. As mentioned, we have some excellent speakers enlisted for the entire rest of the year, and plenty of room in our virtual lecture hall for a bigger audience! Please consider this offer!

We also plan to broaden our outreach to the public very soon, so as to expand the list of people who can attend our virtual meetings, star parties, etc. We also will be looking into a recruitment drive for people who would like to get some hands-on experience running both the main WSO telescope and the (numerous) other scopes we have available in the dome. Though it seems never ending, the coronavirus pandemic *will* abate in the future, and we will be back to operating as we did before (or close to it). To do this, we need some more hands-on people! We have the gear, and people who can show you how to operate it, so don't be afraid to show an interest.

Website

Our upgrade of the website is one project that can still be done during the current pandemic, and again, we hope to get back to it soon.

Miscellaneous talks and resources

I would (again) like to remind people that there are many other organizations that offer excellent online seminars to the public. Check the latest listings of (for local examples): the American Association of Variable Star Observers (AAVSO), the Maria Mitchell Observatory, and the Harvard Smithsonian Center for Astrophysics. These, and other programs, have very interesting web-based talks available.

Binoculars and the Fall/Winter Sky

And finally (again), despite there currently not being “in person” CCAS star parties where we can make telescopes and laser pointer sky tours available to the public, there is a LOT you can see this fall by yourself with an inexpensive, standard pair of binoculars and a simple star chart that shows the constellations and the “Messier Objects.” The latter are bright and easy to see astronomical objects, and the fall and early winter sky has many of them to offer. The Andromeda Galaxy, the Double Cluster in Perseus, the Pleiades in Taurus, and the Great Orion Nebula are naked eye Messier objects that really sparkle in binoculars.

Turning to the planets, Jupiter, Saturn and Mars are also fun to view in the early to mid-evening. Jupiter’s four “Galilean” moons and Saturn’s rings and its moon Titan are easy to spot. Seeing features on all of these planets needs a bit more aperture and magnification, but are within the range of small telescopes.

Some hints for using binoculars: 1) they can “jitter” the image a lot unless you brace them, preferably against something solid, 2) they can get heavy in your hands after a while, especially bigger pairs, and 3) if you are looking high in the sky, get a reclining patio chair or similar to lay down in! You will have little or no success looking up past 45 degrees otherwise!

Quality High School Astronomy/STEM Gear offered free to schools

CCAS member Lee LeBarre sent the following note: “I am a member of CCAS. I have a Celestron 9.25 SCT on a CGEM mount for donation with all accessories including a steel pier. I am trying to donate it to a school on Cape Cod that could use it.” The gear, pictured below, comes with numerous attachments. I hope

someone connected with a Cape high school or grammar school that could use it for their STEM activities. It is a beautiful system that can show students quite a lot.



Last month's speaker
October 1st, 2020

Dr. James Head, Brown University

Topic: "The Apollo Lunar Exploration Program."

Abstract: The Apollo Lunar Exploration Program accomplished six successful lunar landings. Each succeeding Apollo mission was characterized by increasing exploration capabilities (landing accuracy, stay time, EVAs, mobility, experiments, tools, etc.). We present a brief review of the landing sites, surface operations and science return of each succeeding Apollo mission and show how *science and engineering synergism* resulted in a rapid transition from achieving a national goal (Apollo 11) to sophisticated scientific expeditions targeted to areas critical to understanding the origin and evolution of the Moon.

Precis: While we don't, as a practice, make our speaker's PowerPoint presentations publicly available, this month the previous speaker gave us permission, and indeed encouraged us, to distribute his talk. So, as a bonus item, his excellent presentation is attached! Enjoy!

One thing that we didn't get in time for last month's FLL newsletter was a brief resume for Dr. Head. He has had an amazing career, closely connected with the US space program, and I'd like to post a snippet of it here, taken from the Brown University website.

"Professor Jim Head is the Louis and Elizabeth Scherck Distinguished Professor of Geological Sciences. He came to Brown University in 1973, following his work with the NASA Apollo program, in which he analyzed potential landing sites, studied returned lunar samples and data, and provided training for the Apollo astronauts. His current research centers on the study of the processes that form and modify the surfaces, crusts and lithospheres of planets, how these processes vary with time, and how such processes interact to produce the historical record preserved on the planets. Comparative planetology, the themes of planetary evolution, and application of these to the study of early Earth history are also of interest. He has followed up his research on volcanism, tectonism and glaciation with field studies on active volcanoes in Hawaii and at Mount St. Helens, on volcanic deposits on the seafloor with three deep sea submersible dives, and during five field seasons in the Antarctic Dry Valleys.

Since 1984, Dr. Head convenes the Vernadsky Institute/Brown University microsymbiosia, held twice yearly in Moscow and Houston. He has served as an investigator with NASA and Russian Space Missions, such as the Soviet Venera 15/16 and Phobos missions, and the US Magellan (Venus), Galileo (Jupiter), Mars Surveyor, Russian Mars 1996, and Space Shuttle missions.

Dr. Head is presently a co-investigator for the [NASA MESSENGER mission to Mercury](#) and the [Lunar Reconnaissance Orbiter](#), as well as the European Space Agency's [Mars Express Mission](#)."

We are amazingly fortunate to have Jim Head and many other renowned professional scientists giving talks to our club, and I can only say a huge "Thank You" to them all for being so generous with their time and efforts. (And many of them have come back for further talks. Dr. Head, for instance, has volunteered a talk on the Chinese space program, an offer which I will certainly accept!)

This month's speaker

November 5, 2020

Dr. Larry Marschall, Emeritus Professor, Gettysburg College

Abstract: Though astronomers don't deal with the details of day to day meteorology, they do deal with global effects on the environment of planets. In this talk we'll take a long view, looking at other planets and our own, and asking questions like: "What astronomical conditions affect the climate of a planet?" and "How do we know that current climate change is caused by anthropogenic greenhouse gases and NOT caused by astronomical variations in the earth's orbit or the sun's radiation.".

Larry is a long-time friend of CCAS, and an excellent speaker, so I hope you can attend! As many of our members and friends on the Cape are associated in some way with oceanography and climate, it should be of special interest to them!

Coming speakers this fall

December – Dr. Frank Primini, HSCfA, "The Chandra Source Catalog". Dr. Primini has spoken to CCAS on Chandra results before, and this will be an update on his latest results.

Spring speakers TBA

Don't worry, we're working on the spring schedule! (And it won't be 2020, which I think we'll all be grateful for!)