



AU AstroNews

The Newsletter of the Astronomical Unit

May 2022

Sponsored by the Santa Barbara Museum of Natural History



Tim Crawford and Jerry Wilson assist on the repair and collimation of the club's Starsplitter telescope. Photo credit: Tom Totton.

OUTREACH SUMMARY

To get full outreach credit, SBAU volunteers must be fully vaccinated and masked, and have undergone the SBMNH background check to participate in outreach activities. To get vetted, contact SBMNH Volunteer Manager Rebecca Coulter <rcoulter@sbnature2.org>. It's quick and painless.

Since the last newsletter, certified SBAU volunteers Krissie Cook, Tim Crawford, Tessa Flanagan & Duff Kennedy, Sean Kelly, Pat & Chuck McPartlin, Janet & Martin Meza, Bruce Murdock, Charles Schueler, Tom Totton, and Tom Whittemore showed the sky to 1154 guests. David Gay, Brian Green, Chris Larson, and Peggy O'Rork also helped out.

OUTREACH EVENTS

*** Masks are still required for all SBAU volunteers at observing events ***

TUESDAY, MAY 3, SETUP 7 PM

Telescope Tuesday returns to the Camino Real Marketplace on the first Tuesday of each month, in the plaza by the theater.

FRIDAY, MAY 6, 7:30 PM

The SBAU monthly meeting will be on YouTube again this month. The speaker will be Dr. Ben Darvish of CalTech, speaking on galaxy evolution.

SATURDAY, MAY 7, SETUP 9 AM

International Astronomy Day at Camino Real Marketplace. We'll be set up with solar scopes and activities from 10 AM to 4 PM, take a break for dinner, then set up scopes for a star party from 7 PM to 10 PM. Volunteers needed, contact Chuck! Save your receipts - the club will comp your lunch/dinner if you help out!

SATURDAY, MAY 14, SETUP 7 PM

Monthly Public Star Party at SBMNH, next to Palmer Observatory.

SUNDAY, MAY 15, SETUP 6 PM

Total Lunar Eclipse viewing at Camino Real Marketplace, for the umbral phases from 7 PM to 10 PM.

FRIDAY, MAY 20, SETUP 7 PM

Monthly Public Telescope Night at Westmont, at their Keck Observatory, next to the athletic fields.

FROM THE PRESIDENT

Jerry Wilson

As we begin to transition to a post-pandemic world, the SBAU is cautiously resuming our extensive list of public outreach and community service. We hope to return to our full slate of activities. These include outreach to support school science nights, public star parties, operation of the Museum's Palmer Observatory, participation in supporting the SBMNH planetarium shows, and Westmont College's "Third Friday" public viewings at their observatory. Since these activities involve personal interaction with the public, they were suspended for the last two years.

In the meantime some club activities were successfully transferred to a Zoom format and are planned to continue as such. These activities include our Monday morning Astro Hour (a legacy of our radio show), the Tuesday evening Telescope Workshop, and temporarily our monthly public meetings, held on the first Friday of every month. The latter will return to an in person format in Farrand Hall when the Museum allows it. The Astro Hour and Telescope Workshop have developed a group of participants that cannot easily make it to the Museum campus so will remain on a Zoom format. People interested in these chats should go to our club website at SBAU.org.

Bringing the club back on line will require several new volunteers to step forward and fill several vacant positions.

These are:

1. A club secretary to record minutes of our business meetings. These meetings are held monthly in the circular patio in front of the Palmer Observatory on the second Saturday of the month immediately preceding the monthly star party, weather permitting. Zoom meetings are recorded so written minutes are superfluous.

2. An assistant web master to help maintain our Zoom capability and to edit and update the club website. Our current webmaster, Tom Totton, is doing an excellent job, but needs a break. We need someone to assist and support our webmaster.

3. A Zoom host, to run the Zoom-based meetings, such as Monday's Astro Hour, the telescope workshop and our monthly public meetings.

Please contact Jerry Wilson, the club president if you can assist in any of these capacities. My email address is on our website at SBAU.org.



"Boy! This is the last time I ever have some of Tim Crawford's Green Chili Salsa!" Photo credit: Tom Totton.

STAR STORIES

This column is what I hope will become a regular one that will focus on a particular star and the story it tells. I was led to this after looking at some of the bits and pieces that make up the story of Arcturus – now very prominent in our spring night sky. Month by month I will focus on another nighttime jewel. I am also hoping that members of our club might use this information to enhance their engagement with the public at our regular outreach events.

To kick off this effort with the May issue, let's take a closer look at the brightest star in the constellation, Boötes, the Herdsman. This is the orange giant, Arcturus.



The light you see this evening from Arcturus comes to you from the year 1985. So, if you happen to be 37, this is your birth star. Surprisingly, Arcturus is one of the fastest moving stars across the night sky. This is called proper motion, but don't expect to see this tonight since Arcturus compiles about 2" of transverse motion over the course of about eight centuries.

It was in 1933, at the Chicago World's Fair, that the light from this star was focused onto an array of photoreceptors to set off the exposition's floodlights. The thinking at the time was that Arcturus was forty light years distant and that its light had come from the year 1893 – the setting for the last World's Fair. Since then Arcturus' distance has been recalibrated so that the light was actually coming from the year 1896!

It is estimated that Arcturus is about 7 billion years old, having moved off the Main Sequence and likely burning Carbon in its core. Hydrogen shell burning outside the core would explain its large size. With an estimated mass between 1.0 and 1.5 solar masses, Arcturus will end its life as a White Dwarf. Just like our Sun! So, when you point to Arcturus at an upcoming star party you can say to the guests: "This is what our Sun will look like in about 3 billion years!"

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 TELESCOPE TUESDAY 7PM	4	5	6 AU MONTHLY MEETING ON YOUTUBE 7:30 PM	7 INTERNATIONAL ASTRONOMY DAY 10AM – 10PM
8 FQ MOON	9	10	11	12	13	14 SBMNH PUBLIC STAR PARTY 8 PM
15 FULL MOON, TOTAL LUNAR ECLIPSE 7PM	16	17	18	19	20 WESTMONT PUBLIC TELESCOPE NIGHT 8 PM	21
22	23 LQ MOON	24	25	26	27	28
29	30 NEW MOON	31				