



AU AstroNews

The Newsletter of the Astronomical Unit

July 2025

Sponsored by the Santa Barbara Museum of Natural History



The night is all aglow at the Palmer Observatory on a "Second Saturday" outreach. Photo courtesy of Owen Duncan.

OUTREACH SUMMARY

Since the last newsletter, certified AU volunteers Andy Allen, Tim Crawford, Joe Doyle, Ronnie Herron, Ila Jade Komasa, David Larson, Pat & Chuck McPartlin, Janet & Martin Meza, Bruce Murdock & Marlin, Ron Nixon, Edgar Ocampo, Michael Robertson, Cez & Tom Totton, Chuck Watson, Tom Whitemore, Greg Wittmann, and Andre Yew showed cool stuff in the sky to 1072 people, helped by David Feinberg and Rachel Freed.

SBAU volunteers must have undergone the SBMNH background check, and conform with the SBMNH policies for dealing with the public, to participate in outreach activities. To get vetted, contact SBMNH Volunteer Manager Rebecca Coulter <rcoulter@sbnature2.org>. It's quick and painless.

OUTREACH EVENTS FOR JULY

TUESDAY, JULY 1, SETUP 7 PM

Telescope Tuesday at the Camino Real Marketplace, in the plaza by the theater.

FRIDAY, JULY 4, SETUP 8 PM

Telescopes for campers at Refugio State Beach. We set up in the day use parking lot, at the SW side of the campground.

SATURDAY, JULY 5, SETUP 8 PM

Slide show and telescopes for campers at Cachuma Lake. We set up in the parking lot for the Fireside Theater.

THURSDAY, JULY 10, 7 PM *** NOTE CHANGE TO SECOND THURSDAY ***

Short planetarium show, followed by the monthly SBAU meeting at 7:30 in Fleischmann Auditorium at SBMNH. This will be a hybrid meeting, also on Zoom. Watch your email or find the link on the SBAU web page. Our speaker will be Martin Cacan, Chief Pilot of the Ingenuity Helicopter on Mars.

SATURDAY, JULY 12, 4 PM

AU monthly planning meeting on Zoom. Watch your email for the link.

SATURDAY, JULY 12, SETUP 7:30 PM

Monthly Public Star Party at SBMNH, next to Palmer Observatory, 8:30 to 10 PM.

WEDNESDAY, JULY 16, SETUP 8 PM

Telescopes for campers at Carpinteria State Beach. We set up on the sidewalk towards the beach from the entry kiosk.

FRIDAY, JULY 18, SETUP 8 PM

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

SATURDAY, JULY 19, SETUP 8 PM

Slide show and telescopes for campers at Cachuma Lake. We set up in the parking lot for the Fireside Theater.

FRIDAY, JULY 25, SETUP 7 PM

Telescopes for campers at Refugio State Beach. We set up in the day use parking lot, at the SW side of the campground.

SATURDAY, JULY 26, SETUP 8 PM

Slide show and telescopes for campers at Cachuma Lake. We set up in the parking lot for the Fireside Theater.

FROM THE PRESIDENT

Jerry Wilson

“The Two Tensions”

There are two areas of Physics that are currently experiencing what are labeled as “Tension.” That is two different ways of measuring a single parameter, yet getting different answers. At first the errors bars (uncertainty in the measurement) were large enough that it just meant the measurement process was not well controlled. But after several decades of improving measurement techniques and collecting large amounts of data, it’s clear the disagreement points to something that is not well understood. Oh boy, new Physics!

These two tensions are in measurement of the Hubble parameter and the Neutron lifetime.

A single Neutron in free space (not in an atomic nucleus) has a half-life of roughly 14.7 minutes. But more accurately: the ‘Beam’ method gives 888 seconds and the ‘Bottle’ method gives 879 seconds. Put neutrons in a bottle and count how many are left per time. The beam method counts the outflow of decay products. This 9-second difference is significant and exceeds the estimated uncertainties,

leading to what's known as the "neutron lifetime" anomaly.

The Hubble Tension refers to the discrepancy between the observed expansion rate of the universe and the predicted rate based on the standard model of cosmology. A new study using Webb data found a Hubble parameter of 72.6 km/s/Mpc, nearly identical to the value found by Hubble for the same galaxies.

Another measurement using the Dark Energy Spectroscopic Instrument (DESI) and precise distance measurements to the Coma Cluster of galaxies yielded a Hubble parameter of 76.5 km/s/Mpc, further supporting a faster expansion rate.

Measurement of each value of each Tension has become significantly more precise than the value of the difference.

Next month I discuss proposed solutions of these ‘Tensions’.

ARTS CORNER

Tom Whittemore

Would you like to share your story about how you became interested in astronomy? What was it that got you to look up at the night sky? And what sparked you to share your enthusiasm with others? Please send your story to the newsletter at Kometes@aol.com!

DINING AT THE MUSEUM IN THE DINOSAUR

FOREST

Diane Welcenbach – SBAU Event Coordinator

SBAU held a summer potluck event for club members and their guests at the beautiful Broder building in the SB Museum of Natural History on June 6th. The Broder building is at the entrance to the dinosaur forest just across the bridge. You can hear the roar of the large dinos as we gathered for the feast.

It was well attended by about 40 people despite the heavy traffic on all the side streets due to a major

nine car accident on the 101 southbound freeway at 2:30pm. The sun came out with light to no wind which made the evening temperature very enjoyable.

A wide variety of foods made it interesting. Appetizers included deviled eggs, selection of olives, green/red grapes, crackers, guacamole, salami and cheese – Some Main dishes – enchiladas, lasagna, and chicken. Side dishes – vegetables, melon, various salads, Jello. Save room for dessert! Selections included cherry pie, brownies, chocolate cake with filling, chocolate donuts, and numerous delicious cookies.

Tom Totton brought some astronomy books that were donated to the club. He put a few on each table so people could see them. There was a great selection - technical books, children's books, and less technical books. Members were encouraged to take a look and if interested, make an offer to purchase. Many of the members took advantage of this wonderful opportunity and went home with a fantastic book. Overall, everyone had a really great time socializing, enjoying a gorgeous summer evening and talking astronomy. Thanks to everyone who attended!



Photo courtesy of Diane Welcenbach.

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JULY 2025						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 CAMINO REAL MARKETPLACE 7PM	2	3	4 REFUGIO STATE BEACH 8PM	5 CACHUMA LAKE 8PM
6	7	8	9	10 GENERAL MEETING 7PM	11	12 ZOOM PLANNING 4PM STAR PARTY SETUP 7:30PM
13	14	15	16 CARPINTERIA STATE BEACH 8PM	17	18 WESTMONT 8PM	19 CACHUMA LAKE 8PM
20	21	22	23	24	25 REFUGIO STATE BEACH 7PM	26 CACHUMA LAKE 8PM
27	28	29	30	31		