



# AU AstroNews

## The Newsletter of the Astronomical Unit

July 2026

Sponsored by the Santa Barbara Museum of Natural History



*SBAU members enjoy this past June Potluck at the museum's Fleischmann Auditorium. Photo: Diane Welcenbach.*

### **OUTREACH SUMMARY**

Despite June gloom, certified AU volunteers Andy Allen, Tim Crawford, Tessa Flanagan, Brian Green, Art Harris, Ronnie Herron, Sean Kelly, Ila Jade Komasa & Quasars, David Larson, Pat & Chuck McPartlin, Edgar Ocampo, Michael Robertson, Woody Schlom, Sohini Sengupta, Tom Totton, Chuck Watson, Diane Welcenbach, Tom Whittmore, Jerry Wilson, Greg Wittmann, and Andre Yew showed cool stuff in the sky to **1541** people, helped by Jen Gee & students, Andy Gilbert, Mike Jacoby, and Scott Orlosky.

*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](mailto:rcoulter@sbnature2.org)>. It's quick and painless.*

### **OUTREACH EVENTS**

#### **FRIDAY, JULY 3, 6:30 PM**

Short planetarium show, followed by the monthly SBAU meeting at 7 PM in Farrand Auditorium at SBMNH. Our speaker will be Dr. Gerardo Aldana of UCSB, on Ancient Mayan Astronomy from 700 to 800 years ago.

#### **SATURDAY, JULY 4, 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 10, 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 11, SETUP 7:30 PM**

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

#### **SUNDAY, JULY 12, 4:30 PM**

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

#### **WEDNESDAY, JULY 15, 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 17, SETUP 8 PM**

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

### **SATURDAY, JULY 18, SETUP 8 PM**

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

### **TUESDAY, JULY 21, SETUP 7 PM**

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

### **FRIDAY, JULY 24, 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 25, 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 31, 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.

### **HABITABLE WORLDS OBSERVATORY**

*Jerry Wilson*

A new mission is being planned by NASA to identify Exo-Earths in our galaxy. These would be planets like the Earth that are probably supporting life or on the development path like Earth was long ago. The mission is called the Habitable Worlds Observatory, or HWO. The plan is to launch in the late 2030s or 2040s as the next addition to the "Great Observatories Program," after the Nancy Grace Roman telescope launch this year.

The satellite will be a very large, high resolution telescope of 6 to 8 meter diameter with sensitivity from UV, through visible, and into the infrared, with both imaging capability as well as spectroscopy.

To confidently state that a planet has life, HWO won't just look for one single gas or it being in the Goldilocks zone; it will look for a combination of gases in "chemical disequilibrium" (gases that shouldn't exist together unless biology is actively replenishing them).

Oxygen (O<sub>2</sub>) and Ozone (O<sub>3</sub>): These are produced in mass quantities on Earth via photosynthesis. Recent modeling shows HWO will need a visible-light resolving power of at least 140 to confidently isolate molecular oxygen.

Methane (CH<sub>4</sub>): Often biological in origin (from microbes or organic decay). The critical "Smoking Gun" combination would be finding oxygen and methane together. These two gases naturally react and destroy each other over time. If a planet's atmosphere shows high levels of both, it means an active, massive source (like a biosphere) must be constantly pumping them out.

Water Vapor (H<sub>2</sub>O): Confirming the presence of water vapor helps verify that the planet can support liquid surface oceans.

### **ANNUAL JUNE POTLUCK**

*Diane Welcenbach*

Another great potluck event for the SBAU was held Friday June 12th. The event was indoors this year in Fleischmann Hall at the SB Museum of Natural History. It was wonderful to have such a great venue. The tables were spaced out nicely for people to sit with lots of room to move around. The participation was excellent with over 45 people in attendance. Special thanks to Pat McPartlin for bringing the wonderful name tags that everyone appreciated. There was a wide variety of food. Some appetizers included deviled eggs, chips & dip, green organic grapes and blueberries. Main dishes - enchiladas, lasagna, chicken, sausage and deli sandwiches. Lots of salads/sides - pasta, green salad, cucumber salad, breaded zucchini, lentil, fruit/apples and a club favorite - the Jello salad. Dessert is always a treat with many selections including the decadent chocolate mousse cake, cheesecake, strawberries with whip cream, various cookies, donuts, key lime pie, pastries/muffins, brownies, and Moon pies. Tom Totton, club equipment manager, displayed donated astronomy equipment looking for new owners. Many members took advantage of this wonderful opportunity. Overall, everyone had a really great time socializing, enjoying a gorgeous summer evening and talking astronomy. Thanks to everyone who attended, helped set up/clean up!



*Nancy Holt's Sun Tunnels, installed in far west Utah, is a set of four large concrete cylinders. On the solstices, they frame the sun on the horizon as it rises and sets. Each tunnel has small holes bored into its sides that form images of the constellations Draco, Perseus, Columba, and Capricorn.*

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AU AstroNews, the monthly publication of the **Astronomical Unit (AU)**, is mailed to the AU membership. For publishing consideration for the next month, submit astronomical items by the 20th of the current month!

**AU annual membership rate: \$20**

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# The Astronomical Unit

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JULY 2026						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3 MONTHLY MEETING 6:30PM	4 CACHUMA LAKE 8PM
5	6	7 LQ MOON	8	9	10 REFUGIO STATE BEACH 8PM	11 SBMNH STAR PARTY SETUP 7:30PM
12 PLANNING MEETING ON ZOOM 4:30PM	13	14 NEW MOON	15 CARPINTERIA STATE BEACH 8PM	16	17 WESTMONT 8PM	18 CACHUMA LAKE 8PM
19	20	21 FQ MOON CAMINO REAL MARKETPLACE 7PM	22	23	24 REFUGIO STATE BEACH 8PM	25 CACHUMA LAKE 8PM
26	27	28	29 Full Moon	30	31 REFUGIO STATE BEACH 8PM	