

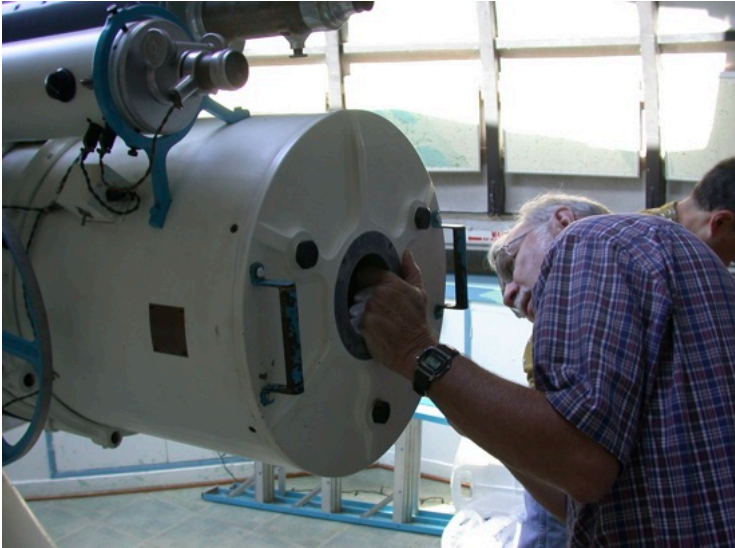


# AU AstroNews

The Newsletter of the Astronomical Unit

June 2026

Sponsored by the Santa Barbara Museum of Natural History



*Art Harris adjusts the optics on a classic, antique telescope.  
Photo: Tom Totton.*

## OUTREACH SUMMARY

Since the last newsletter, and despite the weather cancellation of Astronomy Day, certified AU volunteers Andy Allen, Krissie Cook & Girl Scouts, Tim Crawford, Joe Doyle, Tessa Flanagan, Brian Green, Ronnie Herron, Ila Jade Komasa & Shannon Gerow & Quasars, David Larson, Pat & Chuck McPartlin, Edgar Ocampo, Javier Rivera, Woody Schlom, Sohini Sengupta, Tom Totton, Tom Whittmore, and Greg Wittmann, plus helpers Ken Kihlstrom and David Feinberg showed cool stuff in the sky to **1344** people.

*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, JUNE 5, 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.

### FRIDAY, JUNE 12, 5 PM \*\*\* NOTE SECOND FRIDAY \*\*\*

Annual summer potluck dinner in Fleischmann Auditorium at SBMNH.

### SATURDAY, JUNE 13, SETUP 7:30 PM

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

### SUNDAY, JUNE 14, 4:30 PM

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

### TUESDAY, JUNE 16, SETUP 7 PM

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

### WEDNESDAY, JUNE 17, SETUP 8 PM

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

### FRIDAY, JUNE 19, SETUP 7 PM

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

### SATURDAY, JUNE 20, SETUP 8 PM

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

### **FRIDAY, JUNE 26, 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, JUNE 27, SETUP 7 PM**

Slide show for campers at Lopez Lake, at the nature theater at the marina.

### **SBAU MEMBER SUMMER POTLUCK**

Friday June 12, 2026

At SBMNH Fleischmann Hall

Starts at 5PM

Bring some food to share and your own beverage

Come join the fun!

### ***STRANGE WORLDS?***

*Jerry Wilson*

Subsurface oceans may be common on Kuiper Belt worlds, according to a newly published paper by Bierson et al, "Evidence for a Hot Start and Early Ocean Formation on Pluto," Nature Geoscience, 2020. This work is based on observations from the New Horizons Pluto flyby, which shows that expansion ridges in surface ice flows are common while compression ridges are rare. This analysis supports a warm ocean from Pluto's formation that has been slowly cooling for 4.5 billion years, but with a source of heating in the form of tidal friction from its close moons. The author speculates that this situation may be common for all Kuiper belt objects with moons.

While Pluto may have gained an ocean, a previous claim involving the ocean on Europa is being reexamined. Faint and difficult-to-detect plumes, previously seen on Europa, were thought to originate from the vast global saltwater ocean lurking beneath its icy shell. This material was thought to erupt from cracks in the icy shell of the moon. Now, the evidence for the existence of these plumes has been called into question by the very scientists who initially proposed them.

The reanalysis took the original 99.9% confidence in the plumes' existence and reduced it to less than 90% confidence. According to team leader Lorenz

Roth of the KTH Royal Institute of Technology, Sweden, "That's simply not enough evidence to support the certainty of claims we made at the time." "The evidence for water vapor plumes on Europa isn't as strong as we first understood it," team member Kurt Retherford of the Southwest Research Institute (SwRI) said in a statement. Retherford was part of a team that in 2014 suggested the existence of these European water plumes, but he and his colleagues now reconsider this conclusion.

To reconsider the existence of Europa's water plume eruptions, Retherford and colleagues looked at 14 years of data regarding Europa collected by Hubble using its HST/STIS instrument (Hubble Space Telescope's Space Telescope Imaging Spectrograph). In particular, they honed in on a specific wavelength of ultraviolet light called Lyman-alpha emissions, which are emitted and scattered by hydrogen atoms. "One of the difficulties in interpreting the data back then was determining where to place Europa within its context," Retherford explained. "The way Hubble works left some uncertainty in terms of placement relative to the center of the image. If Europa's placement was off even just by a pixel or two, it could affect how the data gets interpreted."

The team still can't confidently rule out the existence of Europa's water vapor, especially as similar plumes have been more confidently detected on Saturn's icy moon Enceladus, and sulfur dioxide eruptions have been detected from Europa's fellow Jovian moon Io, the most volcanic body in the entire solar system.

The question of the existence of these water plumes from the salty global ocean of Europa may finally be settled in 2030 when NASA's Europa Clipper mission arrives in the Jovian system. The team's research was published on May 5 in the journal Astronomy & Astrophysics. One should note that the speculation of an ocean on Pluto is based on morphology of the visible surface and not spectra of water plumes. This article uses information from two articles in Space.com.



*Looking back at a previous Astronomy Day and Art Harris' table of goodies. Photo: Tom Totton.*

*Looking Up*

Venus and Jupiter and now putting on quite a light show in the West. And you don't need any optical aid to enjoy this special pairing! Just find a clear view of the west with no trees or other obstructions blocking the view after the Sun goes down. A week ago the Moon split the pair, but now has moved on. Now it's your turn! Go out night after night and see how the spacing between these two tightens!

**SBAU CLOTHING FOR SALE**

*Pat McPartlin, Merch Manager*

**SBAU is exiting the clothing business!**

In the inventory, I have at very low prices:

Short-sleeved tee-shirts

—3 small and 4 extra-large, for \$10.00 each.

Long-sleeved tee-shirts

—4 small, 4 extra-large, and 1 at 2X, for \$15 each.

Hoodie sweatshirts (pullover)

—2 small, for \$25.00 each.

SBAU caps (one size fits all) for \$10.00 each.

Clothing sizes are true; all are pre-shrunk. Contact me at [Merchmgr@sbau.org](mailto:Merchmgr@sbau.org) with any questions or requests. Once these are sold, you'll need to go directly to the company that can order these: ID Works in Santa Barbara. Contact them via email at [info@idworkssb.com](mailto:info@idworkssb.com) or call them at 805-965-6001. However, you'll have to pay full price and sales tax,

and the club will earn no funds — talk with them to have your favorite SBAU clothing set up for you!

<b>AU Information Box</b>	
<b>President:</b>	Jerry Wilson            252-2206 <a href="mailto:jerryawilsonphd@gmail.com">jerryawilsonphd@gmail.com</a>
<b>Vice President:</b>	Ronnie Herron <a href="mailto:vicepresident@sbau.org">vicepresident@sbau.org</a>
<b>Secretary:</b>	Mike Lawson <a href="mailto:sbau.secretary@gmail.com">sbau.secretary@gmail.com</a>
<b>Treasurer:</b>	Pat McPartlin            964-8201 <a href="mailto:treasurer@sbau.org">treasurer@sbau.org</a>
<b>Equipment:</b>	Tom Totton                562-8795 <a href="mailto:equipment@sbau.org">equipment@sbau.org</a>
<b>Outreach:</b>	Chuck McPartlin        964-8201 <a href="mailto:outreach@sbau.org">outreach@sbau.org</a>
<b>Newsletter:</b>	Tom Whitemore         687-2025 <a href="mailto:kometes@aol.com">kometes@aol.com</a>
<b>Webmaster:</b>	Tom Totton                562-8795 <a href="mailto:webmaster@sbau.org">webmaster@sbau.org</a>
<b>Events:</b>	Diane Welcenbach <a href="mailto:Events@SBAU.org">Events@SBAU.org</a>
<b>Merch Manager:</b>	Pat McPartlin            964-8201 <a href="mailto:Merchmgr@sbau.org">Merchmgr@sbau.org</a>
<b>SBMNH Astronomy Programs Manager</b>	
	Ila Jade Komasa            682-4711x164 <a href="mailto:ijadekomasa@sbnature2.org">ijadekomasa@sbnature2.org</a>
<b>AU AstroNews</b> , the monthly publication of the <b>Astronomical Unit (AU)</b> , is mailed to the AU membership. For publishing consideration for the next month, submit astronomical items by the 20th of the current month!	
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<b>AU mailing address:</b> Astronomical Unit c/o Santa Barbara Museum of Natural History 2559 Puesta Del Sol Road Santa Barbara, CA 93105	
<b>On the Web:</b> <a href="http://www.sbau.org/">http://www.sbau.org/</a>	

# The Astronomical Unit

c/o Santa Barbara Museum of Natural History  
 2559 Puesta Del Sol Road  
 Santa Barbara, CA 93105-2998

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