



# AU AstroNews

## The Newsletter of the Astronomical Unit

January 2023

Sponsored by the Santa Barbara Museum of Natural History



Looking back.... Photo credit: Tom Totton.

### SBAU ELECTION RESULTS

After another hotly contested pandemic election, Jerry Wilson remains President, Ron Herron remains Vice President, Colin Taylor remains Treasurer, and Pat & Chuck McPartlin will fill in as Secretary. Victims of appointed positions remain the same.

### THE MOON OCCULTS MARS (AGAIN!)

The Moon will pass in front of Mars from our point of view on the evening of Monday, January 30, vanishing behind the dark upper left edge of the Moon around 8:35 PM PST, and emerging again on the lower right around 9:23 PM.

### OUTREACH SUMMARY

Happy New Year! We had some welcome rain in December, so some outreach was clouded out, but AU volunteers Tim Crawford, Pat & Chuck McPartlin, Janet & Martin Meza, Charles Schueler, Tom Totton, Tom Whittemore, and Andre Yew showed cool stuff in the sky to **190** people.

Public outreach roared back in 2022, with **114** events, and attendance of **12,120**. We've made it to the Moon, with attendance topping 240,000 since 2003!

To get full outreach credit, SBAU volunteers must be fully vaccinated and boosted, and have undergone the SBMNH background check 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.

For January, school events are really ramping up. Help out if you can!

### OUTREACH EVENTS

WEDNESDAY, JANUARY 4, PERIHELION, SO WE'RE CLOSEST TO THE SUN FOR THE YEAR.

FRIDAY, JANUARY 6, 7:30 PM

Monthly AU meetings return to Farrand Auditorium at SBMNH! Another hybrid Zoom/in-person meeting, with speaker TBD. If you come in person, there will be a short planetarium presentation at 7 PM. Check the SBAU.org website for details, updates, and links.

THURSDAY, JANUARY 12, SETUP 5 PM

Telescopes for an astronomy night at Providence School, 3225 Calle Pinon in Santa Barbara. We enter through a gate off Calle Pinon at the NW side of campus.

SATURDAY, JANUARY 14, 5 PM

AU monthly planning meeting via Zoom.

SATURDAY, JANUARY 14, 7 PM

Monthly Public Star Party at SBMNH, at Palmer Observatory.

WEDNESDAY, JANUARY 18, SETUP 5 PM

Telescopes for Science Night at Foothill School, 711 Ribera Drive in Noleta. We enter through a gate off Cathedral Oaks at the NW side of campus.

### THURSDAY, JANUARY 19, SETUP 6:30 PM

Telescopes for an astronomy night at Santa Barbara Junior High School, 721 E. Cota Street. We enter through a gate where E. Ortega Street and N. Quarantina Street meet, and set up behind the Marjorie Luke Theater.

### FRIDAY, JANUARY 20, SETUP 6 PM

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

### TUESDAY, JANUARY 24, SETUP 7 PM

Telescope Tuesday at Camino Real Marketplace, in the plaza by the theater. For 2023, Telescope Tuesday will be the fourth Tuesday of each month.

### THURSDAY, JANUARY 26, SETUP 4:30 PM

Telescopes for students at Dunn School, 2555 CA-154, Los Olivos. Dinner for volunteers at 5:30 in their dining hall, followed by a star party on the soccer field. Please contact Chuck for details if you can help out!

### MONDAY, JANUARY 30, 8:35 - 9:23 PM PST

### MOON OCCULTS MARS!



“Some campout, huh, Corky? And not a dog biscuit in sight!”  
Photo credit: Tom Totton.

### FROM THE PRESIDENT

Jerry Wilson (adapted from a New York Times article)

Three physicists, whose works each showed that nature is even weirder than Einstein had dared to imagine, have been named winners of the 2022 Nobel Prize in Physics. John Clauser, of J.F. Clauser and Associates in Walnut Creek, Calif.; Alain Aspect of the Institut d’Optique in Palaiseau,

France; and Anton Zeilinger of the University of Vienna in Austria, will split a prize of 10 million Swedish kronor.

Their independent works explored the foundations of quantum mechanics - the paradoxical rules that govern behavior in the subatomic world. In experiments conducted over the last 50 years, they confirmed the reality of an effect that Albert Einstein had disdained as “spooky action at a distance.”

Measuring one of a widely separated pair of particles, could instantaneously determine the results of measuring the other particle, even if it were light-years away. Today, physicists call this strange effect quantum entanglement, and it is the basis of the burgeoning field of quantum information. When the award winners were announced, Eva Olsson, a member of the Nobel Committee for Physics, noted that quantum information science had broad implications in areas like cryptography and quantum computing.

As Daniel Kabat, a physics professor at Lehman College in New York explained recently, “We’re used to thinking that information about an object — say that a glass is half full — is somehow contained within the object.” Instead, he says, entanglement means objects “only exist in relation to other objects, and moreover these relationships are encoded in a wave function that stands outside the tangible physical universe.” In other words, things by themselves are not locally real.

In a conversation with the Nobel committee, Dr. Aspect said he had been looking for a limit on quantum mechanics but had not found it. “I am accepting in my mental images something which is totally crazy,” he said.

## ARTS CORNER

### “Falling a Little Bit in Love With the Dark”

Margaret Renkl (excerpted from the December 21, 2022 NYT)

This year the winter solstice arrives on Dec. 21 in the shank of the dark afternoon. Officially the first day of astronomical winter, the solstice is better known as the shortest day of the year. I prefer to think of it as the longest night of the year, for I am making friends with the darkness.

For most of my life, I looked forward to the solstice because it signals a shift to longer days. I was never a fan of winter, and earlier sunrises and later sunsets always felt to me as a kind of compensation for the cold. But my heart has been thawing these past years, watching as winter becomes ever more fragile, its cold imperiled by the changing climate, its darkness by our own foolishness and fear.

With the arrival of LED lighting, which costs so little to burn, every house has become an island of illumination, every city a blazing forest fire of artificial light. In my own backyard, it's hard to enjoy the full moon because so many of our neighbors now leave their lights on all night long. And that's without the holiday displays, each one bright enough to guide an airplane from the sky and land it safely in the middle of our street.

This resolve to snuff out every shadow of night – I wonder how closely it might be linked to the metaphorical darkness of our age. Discord, suffering and sorrow are everywhere, all much darker than any winter night, and tilting Earth is not to blame for them. It's not hard to understand what's really to blame: Media and political figures alike profit when we are angry or afraid.

Literal darkness is simple by comparison, but people inclined to flood their own yards with light for safety's sake seem not to know how little safety they've provided themselves or what measures of actual safety they have closed off in the attempt. They will never know what dangers might lurk beyond their own little circle of light because they've created the very circumstances that prevent their eyes from adjusting to darkness.

### **AU Information Box**

**President:** Jerry Wilson 968-4056  
[jerryawilsonphd@gmail.com](mailto:jerryawilsonphd@gmail.com)

**Vice President:** Ron Herron  
[vicepresident@sbau.org](mailto:vicepresident@sbau.org)

**Secretary:** Pat&Chuck McPartlin 964-8201  
[secretary@sbau.org](mailto:secretary@sbau.org)

**Treasurer:** Colin Taylor 967-8140  
[dancingmagpie@cox.net](mailto:dancingmagpie@cox.net)

**Equipment:** Art Harris 968-4017  
[n6is@cox.net](mailto:n6is@cox.net)

**Outreach:** Chuck McPartlin 964-8201  
[outreach@sbau.org](mailto:outreach@sbau.org)

**Newsletter:** Tom Whittemore 687-2025  
[kometes@aol.com](mailto:kometes@aol.com)

**Webmaster:** Tom Totton 562-8795  
[webmaster@sbau.org](mailto:webmaster@sbau.org)

**Merch Manager:** Pat McPartlin 964-8201  
[parsnip7@yahoo.com](mailto:parsnip7@yahoo.com)

### **SBMNH Astronomy Programs Specialist**

Krissie Cook 682-4711 ext. 164  
[kcook@sbnature2.org](mailto:kcook@sbnature2.org)

**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 rates:**

**Single = \$20 Family = \$25**

### **AU mailing address:**

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

**On the Web:** <http://www.sbau.org>

# The Astronomical Unit

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

## January 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6 FULL MOON  "HYBRID" AU MONTHLY MEETING	7
8	9	10	11	12 PROVIDENCE SCHOOL 5PM	13	14 LQ MOON  ZOOM PLANNING MEETING 5PM STAR PARTY 7PM
15	16	17	18 FOOTHILL SCHOOL 5PM	19 SB JUNIOR HIGH SCHOOL 6:30PM	20 WESTMONT PUBLIC STAR PARTY 6PM	21 NEW MOON
22	23	24 CAMINO REAL MARKETPLACE 7PM	25	26 DUNN SCHOOL 4:30PM	27	28 FQ MOON
29	30 MOON OCCULTS MARS TONIGHT!	31				