



AU AstroNews

The Newsletter of the Astronomical Unit

September 2025

Sponsored by the Santa Barbara Museum of Natural History



It's all "thumbs up" at the start of a Westmont College "Third Friday" public viewing. Photo: Tom Totton.

OUTREACH SUMMARY

Since the last newsletter, certified SBAU/SBMNH volunteers Brandy Ackerman, Andy Allen, David Brehl, Tim Crawford, Joe Doyle, Tessa Flanagan, Art Harris, Ronnie Herron, Ila Jade Komasa & Quasars, David Larson, Pat & Chuck McPartlin, Janet & Martin Meza, Bruce Murdock, Edgar Ocampo, Javier Rivera, Michael Robertson, Tom Totton, Chuck Watson, Diane Welcenbach, Tom Whittemore, Lee Wilkerson, Jerry Wilson & Pat Forgey, and Andre Yew showed the sky to **1843** guests. Jen Gee and David Feinberg helped out.

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 SEPTEMBER

TUESDAY, SEPTEMBER 2, SETUP 7 PM

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

FRIDAY, SEPTEMBER 5, 6 PM * NOTE NEW SCHEDULE *****

AU Merch sales until 6:30, then a short planetarium show, followed by our monthly meeting in Farrand Auditorium at 7 PM. This will be a hybrid meeting, also on Zoom. Watch your email or find the link on the SBAU web page. Our speaker at 7:30 PM will be UCSB Physics graduate student Ish Kaul on our galactic atmosphere and star formation.

SATURDAY, SEPTEMBER 6, SETUP 7 PM

Telescopes for campers at Refugio State Beach, setup in the southwest corner of the day use parking lot.

WEDNESDAY, SEPTEMBER 10, SETUP 7 PM

Telescopes for Carpinteria State Beach. We set up next to the sidewalk to the south of the entry kiosk.

FRIDAY, SEPTEMBER 12, 6 PM TO 9 PM, SETUP 5 PM

Telescopes for a harvest star party at Seagrape Wine Company, 2625 Santa Barbara Avenue in Los Olivos. Catering truck for pre-viewing noshing.

SATURDAY, SEPTEMBER 13, 4:30 PM

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

SATURDAY, SEPTEMBER 13, SETUP 7 PM

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

FRIDAY, SEPTEMBER 19, SETUP 7 PM

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

MONDAY, SEPTEMBER 22, 11:19 AM PDT

Autumn begins with the Equinox.

2026 ASTRONOMY CALENDARS!

Pat McPartlin, SBAU Merch Manager, will have them at the SBAU meeting at **6-6:30pm** on Friday, September 5, 2025. Take note: I won't be able to sell them during OR after the lecture. Each calendar costs a bargain price of \$10 for club and SBMNH members (\$15 for non-members). That's lower than you'll find anywhere in town for such beautiful astronomical photos. So buy several! Christmas is coming! Pat will take cash (exact change is most appreciated), or you can make your check payable to "SBMNH" with a note of: "for SBAU". Remember: I can only sell them from **6-6:30pm**. Happy New Year!

FROM THE PRESIDENT

Jerry Wilson

Several weeks ago Chuck sent me a brief blurb announcing a new proposed approach to bring the theories of Relativity and Quantum Mechanics into a single unified theory of everything. This, as you know, is one of hot spots of current physical research and conjecture. This particular approach proposes a universe of six dimensions. Three spatial dimensions and three time dimensions, with the time dimensions fundamental and spatial dimensions as emergent. Despite my initial panic at trying to imagine three temporal dimensions, this paper is actually very readable. An introduction to this approach follows:

The three time dimensions are:

The first temporal dimension corresponds to quantum-scale phenomena, operating at the Planck time scale. This dimension governs quantum mechanical behavior and fundamental particle interactions.

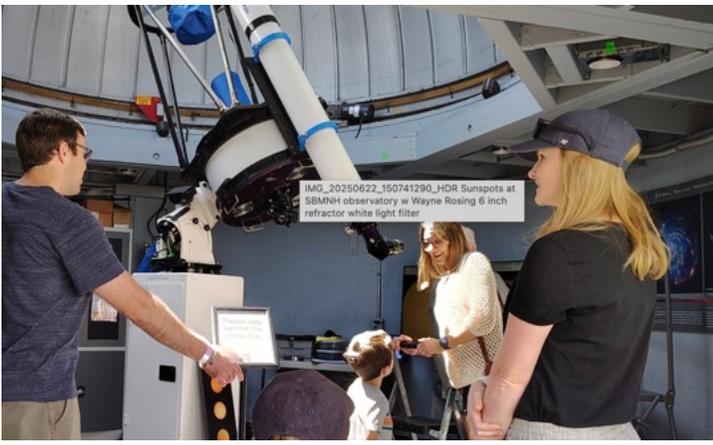
The second temporal dimension manifests at the interaction scale, mediating the interplay between

quantum and classical phenomena. This dimension is crucial for understanding particle generations and weak interactions.

The third temporal dimension operates at cosmological time scales, governing large-scale structure evolution and gravitational phenomena.

These three dimensions are not arbitrary but emerge naturally from fundamental symmetry requirements. Their distinct scales explain why we typically perceive only one temporal dimension in everyday experience, as the effects of the second and third time scales become apparent only at extreme scales. The interplay between these temporal dimensions provides a natural framework for understanding particle generations, weak interaction asymmetries, and the quantum-to-classical transition.

While traditional physics treats time as fundamentally different from space, this framework suggests that time might be the primary fabric of the universe, with mass and energy being manifestations of temporal structure. Just as matter curves spacetime in General Relativity, here the paper proposes that what we perceive as mass and energy are manifestations of temporal curvature and dynamics. This perspective inverts the conventional view: rather than matter existing in time, matter is a property of time itself. The three-dimensional temporal structure provides natural "degrees of freedom" that manifest as the observed properties of particles and fields. This philosophical reframing — viewing time as the fundamental substance of reality rather than as a background parameter — leads to surprising mathematical consistency and experimental predictions. More later....



Enjoying the Sun at the Palmer Observatory on a Sunday afternoon. Photo: Tom Totton.



Tim Crawford shows off his home-crafted solar filter at Astronomy Day. Photo: Tom Totton.

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SEPTEMBER 2025						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2 CAMINO REAL MARKETPLACE 7PM	3	4	5 GENERAL MEETING 6PM	6 REFUGIO STATE BEACH 7PM
7 Full Moon	8	9	10 CARPINTERIA STATE BEACH 7PM	11	12 SEAGRAPE WINE COMPANY 5PM	13 ZOOM PLANNING MEETING 4:30PM STAR PARTY SETUP 7PM
14 LQ Moon	15	16	17	18	19 WESTMONT 7PM	20
21 New Moon	22 EQUINOX 11:19AM PDT	23	24	25	26	27
28	29 FQ Moon	30				