September 2021

Sponsored by the Santa Barbara Museum of Natural History



Tim Crawford explains how a prism works at the Marymount Maker Fair. Photo credit: Tom Totton.

OUTREACH SUMMARY

There was minimal outreach in August. With the Delta variant increasing, please get vaccinated, then stay safe and healthy by wearing masks when necessary, washing your hands frequently, and practicing physical distancing.

OUTREACH EVENTS

The SBAU radio hour has been replaced by a weekly Zoom/YouTube Live event every Monday at 11 AM. If you watch, the Live video should be able to take comments and questions in its Chat area: https://tinyurl.com/2vss2yam

For September, there will be no in-person SBAU meetings or public telescope outreach, but we will have a reduced version of the annual campout (see below). We are conducting the slide show portion of the Cachuma Lake outreaches, but no scopes as yet.

SATURDAY, SEPTEMBER 4, 8 PM

Slide show for campers at Cachuma Lake, in their Fireside Theater

SATURDAY, SEPTEMBER 18, 8 PM

Slide show for campers at Cachuma Lake, in their Fireside Theater.

ANNUAL AU CAMPOUT

The annual AU campout will take place at the Mohawk Shores group campsite at Cachuma Lake from Friday, September 24 (afternoon) through Sunday, September 26 (morning). THERE WILL BE NO COMMUNAL DINNER THIS YEAR.

The number of cars we are permitted to have at the site is limited to about 20, so carpool or come early if you can. If we run out of car permits, and you have to pay at the entrance gate, keep your receipt for reimbursement from the AU.

Information on the Cachuma Lake Wildlife Cruises: Be sure to reserve a place if you want to take the cruise on Friday (2 PM to 3:30 PM), Saturday (10 AM to 11:30 AM and 2 PM to 3:30 PM), or Sunday (10 AM to 11:30 AM), and meet at the marina 30 minutes before. Climb aboard the "Osprey" for a tour with a Santa Barbara County Park Naturalist. The cruise takes a look at area wildlife, wildflowers, and resident birds along the shore. Reservations: Call (805) 688-4515 at least 24 hours in advance. \$15/age 13 and up; \$10/child 5-12 years old; please no children under 5. Masking and social distancing are required.

SEPTEMBER SKY SIGHTS

The watery sky is now dominating the east and south, and familiar autumn constellations are returning, led by Pegasus. A thin crescent Moon will be near Venus at sunset on Thursday, September 9. On Monday, September 13, catch the Lunar X along the terminator from about 2 PM to 4 PM PDT. At 12:21 PDT on Wednesday, September 22, Fall officially begins with the Autumnal Equinox. From 11 PM PDT on September 25 to dawn on the 16th, catch the waning gibbous Moon sitting between orange Aldebaran and the Pleiades.

The International Space Station will be making some visible predawn passes between September 8 and September 14. Evening passes will occur from September 13 through September 20. Its orbit may change from time to time, so to get the latest and most complete predictions, visit Heavens Above https://tinyurl.com/y5yt22ch



"Call me crazy but I always wave to aliens!" Photo credit: Tom Totton.

FROM THE PRESIDENT

Jerry Wilson

The Moon is a Harsh Mistress by Robert Heinlein. I read this book in junior high along with every other science fiction book I could lay my hands on. Of course, I had the advantage that there was no junior high where I lived so we actually started high school in the seventh grade. The high school had an extensive library - well beyond what a junior high would have had. I was in heaven.

The book led the reader through a trip to a scientific settlement on the moon; through the vacuum of space, and to an alien environment where any misstep could prove fatal. And many of the characters met such horrible ends; sudden vacuums because a hatch was improperly sealed, and the lunar surface with abrasive surfaces that could compromise a space suit - and did.

Now we're starting to see those adventures become a reality. The first astronauts in the 70s (I'm including 1969 in the seventies) had a brush with disaster from the lunar dust. It was fine-grained and each grain was sharp. Impossible to keep out of the lander, it slowly compromised the hatch's ability to

make an airtight seal. Disaster was only averted because the trips were short. Staying several weeks, it was estimated, after the fact, that they could not have pressurized the ascent vehicle for the trip home.

The moon is also covered with iron nanoparticles of unknown origin and unknown consequences, I recently read. What other strange effects and phenomena will be discovered when we, and others, start building permanent bases at the lunar South Pole? We're not that far away.

Artemis has recently had its launch date moved back a year to 2025, but Elon is not changing his schedule and may actually get there first – even though he's not that good about meeting announced schedules. These are exciting times. I have been assured by my Tesla salesman that my new Model Y will work on both the moon and Mars - with the proper tires. I'm ready.



"Gimme a Y!" Photo credit: Tom Totton.

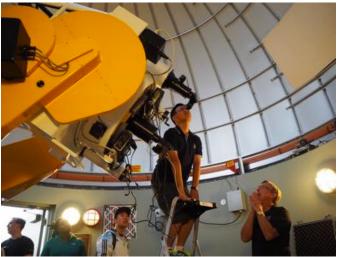
ARTS CORNER

The Leaky Faucet Ted Kooser

All through the night, the leaky faucet searches the stillness of the house with its radar blip: who is awake? Who lies out there as full of worry as a pan in the sink? Cheer up, cheer up, the little faucet calls, someone will help you through your life.



"That's right, Art. I just clean the meniscus with a fistful of Comet and a scrubbing pad." Photo credit: Tom Totton.



"If you close the <u>other</u> eye, you should be able to see the target." Photo credit: Tom Totton.

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VACANT

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

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The Astronomical Unit

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September 2021						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4 CACHUMA LAKE 8 PM
5	6 New Moon	7	8	9	10	11
12	13 FIRST QUARTER MOON LUNAR X	14	15	16	17	18 CACHUMA LAKE 8 PM
19	20 FULL MOON	21	22 Autumnal Equinox	23	24 AU CAMPOUT	25 AU CAMPOUT
26 AU CAMPOUT	27	28 Last Quarter Moon	29	30		