August 2018

Sponsored by the Santa Barbara Museum of Natural History



"Don't drop this on your toes or you will walk like a duck!"
Photo credit: Tom Totton.

AUGUST GENERAL MEETING

Dr. Tengiz Bibilashvili, UCSB Physics instructor specializing in Quantum theory, will be our guest lecturer, with the latest state-of-the-art developments in his field and a side talk about "Gravity assist" in our Solar System, plus a fascinating "puzzle" he plans to spring on our members.

OUTREACH SUMMARY

Since the last newsletter, AU volunteers Farshad Barman, Jason Barrios, Krissie Cook, Tim Crawford, Joe Doyle, John Edkins, Mike Farris, Tessa Flanagan & Duff Kennedy, Ruben Gutierrez, Art Harris, Baron Ron Herron, Mary & Sean Kelly, Ken Kihlstrom, Chris Larson, Adrian Lopez, Zanna Lucy, Pat & Chuck McPartlin, Janet & Martin Meza, Bonnie & Bruce Murdock, Max Neufeldt, Edgar Ocampo, Peggy O'Rork, Toby Schmidt, Gustavo Ritterstein & Celeste, Javier Rivera, Diane & Russell Ruiz, Colin Taylor, Tom Totton, Chris Ulivo, Tom Whittemore, Jerry Wilson, and Linda & Harold Yarbrough showed cool astronomy stuff to 1664 visitors.

OUTREACH FOR AUGUST

The Telescope Workshop meets on Tuesday evenings at 7:30 PM at the Broder Building at SBMNH. Contact Tim Crawford at tcrawf3@cox.net for information. Listen to the AU on the radio at KZSB 1290 AM at 9 AM on the second and fourth Monday of each month.

Here are the AU events scheduled so far for August. Events are subject to change, so to get the latest information on schedules, or directions, just contact Chuck at 964-8201 or macpuzl@west.net

THURSDAY, AUGUST 2, SETUP 7 PM

Telescopes for the Ritz-Carlton Bacara. We set up on the bluff lawn next to the Angel Oak restaurant.

FRIDAY, AUGUST 3, 7 PM

AU monthly meeting in Farrand Hall at SBMNH.

SATURDAY, AUGUST 4, SETUP 8 PM

Slide show and telescopes for campers at Cachuma Lake Campground. We set up on the field at Dakota Plains

WEDNESDAY, AUGUST 8, SETUP 8 PM

Slide show and scopes for Carpinteria State Beach. We set up on the sidewalk toward the ocean from the entry kiosk.

THURSDAY, AUGUST 9, SETUP 7 PM

Telescopes for the Ritz-Carlton Bacara. We set up on the bluff lawn next to the Angel Oak restaurant.

FRIDAY, AUGUST 10, SETUP 7 PM

Telescopes for a star party at Los Flores Ranch Park, in Santa Maria at 6245 Dominion Road. Setup entrance (with signs) will be up Dominion a bit north of the main entrance. Dark skies!

SATURDAY, AUGUST 11, 5 PM

Planning meeting in the classroom next to Javier's office at SBMNH. Come plan your club's activities. All are welcome.

SATURDAY, AUGUST 11, 7 PM

Monthly Public Star Party, next to Palmer Observatory at SBMNH. Perseids.

TUESDAY, AUGUST 14, 8 AM - 6 PM

AU Field trip to the L.A. Museum of Science & Industry. See the Shuttle Endeavour.

FRIDAY, AUGUST 17, SETUP 7:30 PM

Monthly Public Telescope Night at Westmont College Observatory, next to the baseball field.

SATURDAY, AUGUST 18, SETUP 8 PM

Slide show and telescopes for campers at Cachuma Lake Campground. We set up on the field at Dakota Plains

TUESDAY, AUGUST 21, SETUP 7 PM

Telescope Tuesday at the Camino Real Marketplace in Goleta. We set up in the plaza next to the theater.

THURSDAY, AUGUST 23, SETUP 7 PM

Telescopes for the Ritz-Carlton Bacara. We set up on the bluff lawn next to the Angel Oak restaurant.

FRIDAY, AUGUST 24, SETUP 7 PM

Telescopes for Refugio Beach State Campground, in the day use parking lot, southwest corner.

WEDNESDAY, AUGUST 29, SETUP 8 PM

Slide show and scopes for Carpinteria State Beach. We set up on the sidewalk toward the ocean from the entry kiosk.

FRIDAY, AUGUST 31, SETUP 7 PM

Telescopes for Refugio Beach State Campground, in the day use parking lot, southwest corner.



SBAU Annual Field Trip

This year's annual field trip is just around the corner! We will be going by charter bus to the California Science Center on Tuesday, August 14th. We will leave promptly at 8 AM from the Santa Barbara Museum of Natural History, so make sure you come early. You can park in the museum's

parking lot, but please use the spaces toward the back. We will return to Santa Barbara at 6 PM. The cost is only \$25, which includes entry into the Endeavour Space Shuttle Exhibit. There are many other incredible exhibits at the Center that are free, as well as food you can purchase. You may also take your own food. You can send your check payable to the Santa Barbara Astronomical Unit to the SBMNH, 2559 Puesta Del Sol Rd., SB, CA, 93105-2988. Please keep in mind that AU members had priority reservations until July 24th, at which time the trip was opened to the museum membership.

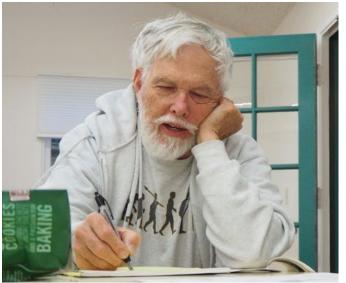
The Five Families

Jerry Wilson

(I saw the following article in the London Times while I was on vacation early this month and thought club members would be interested.)

"The vast majority of asteroids and meteorites are the shattered remains of small planets that existed when the solar system was newly formed, astronomers have found. These celestial bodies, which would have been comparable in size to moons, were broken up in a destruction derby of colliding rocks until all that survived were at least 400,000 much smaller lumps. This model of the asteroids' history should help scientists to predict when they are likely to pose a threat to the earth. In the inner asteroid belt are five large objects – Flora. Vesta, Nysa, Polana and Eulalia - each surrounded by an associated "family" of rocks that appear to have been chipped from its parent body billions of vears ago. Researchers led by Stanley Dermott, a solar system dynamics expert at the University of Florida, studied the trajectories of the "halos" of asteroids. When the group looked at the tilt and eccentricity of the asteroids' orbits as well as how close they were to one another, they found that at least 85 per cent of the asteroids in this part of the belt belonged to one of the five families. The remaining 15 per cent may come from "ghost" families derived from long-destroyed proto-planets. The study is published in the journal Nature Astronomy."

(The "five families" makes it sound like an early version of The Godfather.)



"The Universe was about the size of a tennis ball when I was born." Photo credit: T. Totton



"Beam me up!" Photo credit: Tom Totton.



"I'm sorry. No Bingo for you today." Photo credit: Tom Totton.

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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 rates:

Single = \$20 Family = \$25

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The Astronomical Unit

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August 2018						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	BACARA 7PM	GENERAL MEETING 7PM	4 CACHUMA LAKE CAMPGROUND 8PM
5	6	7	8 CARPINTERIA STATE BEACH 8PM	9 BACARA 7PM	Los Flores Ranch 7PM	PLANNING MEETING 5PM STAR PARTY 7PM SBMNH
12	13 TECH TALK KZSB (AM 1290) 9-10 AM	14 SBAU FIELD TRIP 8AM-6PM	15	16	WESTMONT COLLEGE 7:30PM	18 CACHUMA LAKE CAMPGROUND 8PM
19	20	21 CAMINO REAL MARKETPLACE 7PM	22	BACARA 7PM	24 REFUGIO STATE BEACH CAMPGROUND 7PM	25
26	27 TECH TALK KZSB (AM 1290) 9-10 AM	28	29 Carpinteria State Beach 8PM	30	31 REFUGIO STATE BEACH CAMPGROUND 7PM	