



AU AstroNews

The Newsletter of the Astronomical Unit

July 2019

Sponsored by the Santa Barbara Museum of Natural History



Outreach Coordinator, Chuck McPartlin, shows off a daytime treat to an enthusiastic visitor at the Ritz-Carlton Bacara. Photo credit: T. Totton

JULY GENERAL MEETING

Our speaker for the July general meeting will be UCSB Physics professor, Dr. Crystal Martin. The title of Crystal's talk this evening is "The Galactic Ecosystem." A description of her topic in her own words follows: "When we look at galaxies through a telescope, we really see the tip of the iceberg. Most of the matter in galaxies is essentially invisible; we don't see it, and that's not even counting the dark matter whose nature continues to elude scientists. Over the past decade, astronomers have located the missing matter in diffuse halos surrounding galaxies." Recently a team led by UC Santa Barbara Professor Crystal Martin has explored how these halos interact with galactic disks. She will discuss how her team measured the motion of the halo gas and discuss the implications for how galactic disks grow."

OUTREACH SUMMARY

Since the last newsletter, and despite several June Gloom cloudouts, AU volunteers Brandy Ackerman, Dave Brehl, Tim Crawford, Joe Doyle, John Edkins, Ruben Gutierrez, Art Harris, Baron Ron Herron, Pat & Chuck McPartlin, Janet & Martin Meza, Bonnie & Bruce Murdock, Edgar Ocampo, Gus Pravia, Javier Rivera, Peggy O'Rork,

Diane & Russell Ruiz, Tom Totton, Tom Whittemore, and Jerry Wilson showed cool astronomy stuff to 1211 visitors.

JULY OUTREACH EVENTS

Here are the AU events scheduled so far for June. 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

The Telescope Workshop meets on most 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.

WEDNESDAY, JULY 3, 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, JULY 4, SETUP 7 PM

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

FRIDAY, JULY 5, 7 PM

AU monthly meeting in Farrand Hall at SBMNH. Dr. Crystal Martin of UCSB on galaxies.

SATURDAY, JULY 6, SETUP 8 PM

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

TUESDAY, JULY 9, SETUP 7 PM

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

THURSDAY, JULY 11, SETUP 7 PM

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

FRIDAY, JULY 12, SETUP 8 PM

Telescopes for Refugio State Beach, in the SW corner of their day use parking lot.

SATURDAY, JULY 13, 6 PM

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

SATURDAY, JULY 13, 8 PM

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

THURSDAY, JULY 18, SETUP 7 PM

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

FRIDAY, JULY 19, 8 PM

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

SATURDAY, JULY 20, SETUP 8 PM

Slide show and telescopes for campers at Cachuma Lake Campground. We set up on the grassy field at Dakota Plains. *** 50th Anniversary of the Apollo 11 Moon Landing ***

THURSDAY, JULY 25, SETUP 7 PM

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

FRIDAY, JULY 26, SETUP 8 PM

Telescopes for Refugio State Beach, in the SW corner of their day use parking lot.

SATURDAY, JULY 27, SETUP 8 PM

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

WEDNESDAY, JULY 31, SETUP 8 PM

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

From the President

Jerry Wilson

The AU operates a Telescope Workshop on every Tuesday night except for the second Tuesday of each month, when we support public viewing at the

Camino Real Marketplace. The workshop guides people on every aspect of astronomy from telescope making to astroimaging.

The telescope making part focuses primarily, but not exclusively on grinding a parabolic mirror for use in a Newtonian telescope on a Dobsonian mount. Large, but lightweight telescope can be made this way. The quality of the primary mirror determines how sharp of an image can be obtained. Despite the common misconception the mirror is very easy to make, almost automatic.

We start with two equal disks of glass. Put one down on a small pile of wet newspaper so it won't slide around. Sprinkle some grinding compound mixed with water on the disk. Then place the other disk on top and push it back and forth. The top disk will start being ground away in the center and the bottom one at the edge. Eventually the top one will become a concave sphere and the bottom one a matching convex sphere.

The reason this happens is very simple and has been known since ancient times. At the end of the stroke (the back and forth motion) the top disk's center is over the bottom disk's edge. Half of the top disk is over air. Gravity acts to pull it down resulting in increased pressure on the top disk's center and the bottom disk's edge. Et voila. A mirror is ground.

Drop by and see nature at work. Currently we have an 8-inch diameter f/5 mirror in the final stage of figuring.



Tim readies his tester at a recent Tuesday evening mirror-making workshop. Photo credit: T. Totton.



“Please bear with me and I will teach you how to count further in Klingon.” Photo credit: Bruce Murdock.



“He took my sandwich right off the table, damn it! I know it’s in here somewhere!” Photo credit: T. Totton.



The Annual AU Potluck is now in full swing! Photo credit: T. Totton.



Tim explains the art and science of mirror making to a captive audience at Astronomy Day. Photo credit: T. 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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July 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3 CARPINTERIA STATE BEACH 8PM	4 RITZ-CARLTON BACARA 7PM	5 GENERAL MEETING 7PM	6 CACHUMA LAKE 8PM
7	8 TECH TALK KZSB (AM 1290) 9-10 AM	9 CAMINO REAL MARKETPLACE 7PM	10	11 RITZ-CARLTON BACARA 7PM	12 REFUGIO STATE BEACH 8PM	13 PLANNING MEETING 6PM SBMNH STAR PARTY 8PM
14	15	16	17	18 RITZ-CARLTON BACARA 7PM	19 WESTMONT COLLEGE 8PM	20 CACHUMA LAKE 8PM
21	22 TECH TALK KZSB (AM 1290) 9-10 AM	23	24	25 RITZ-CARLTON BACARA 7PM	26 REFUGIO STATE BEACH 8PM	27 CACHUMA LAKE 8PM
28	29	30	31 CARPINTERIA STATE BEACH 8PM			