



# AU AstroNews

## The Newsletter of the Astronomical Unit

January 2017

Sponsored by the Santa Barbara Museum of Natural History



“You’re kidding, Jerry! The whole ship sank after you removed this porthole glass?” Photo: T. Totton

### THE JANUARY GENERAL MEETING

Our speaker for the January meeting will be Joshua Garber, a Ph.D. Candidate from the Department of Earth Science at UC Santa Barbara. The title of Joshua’s talk is “Earth in Context: A Uniquely Favorable Planet for Life.” He summarizes the content of his talk as follows: “The development of life on Earth arose from many fortunate circumstances, such as favorable planetary surface temperatures, the development of a magnetosphere, the presence of an oxygen-bearing atmosphere, and the onset of plate tectonics. What makes these circumstances unique to Earth? Could life have formed on other planets in our solar system, or in other parts of the universe? In this talk, UCSB PhD Candidate Josh Garber will discuss one geologist’s view of where we came from, some of the features that make our planet hospitable, how other rocky planets in our solar system evolved, and what we are looking for to discover other habitable planets elsewhere in the universe.”

### DECEMBER OUTREACH SUMMARY

Since the last newsletter, AU volunteers Andy Allen, Farshad Barman, Mike Chibnik, Tim Crawford, John Edkins, Art Harris, Ed Kalasky, Chris Larson, Pat & Chuck McPartlin, Janet &

Martin Meza, Bonnie & Bruce Murdock, Edgar Ocampo, Peggy O’Rork, David Salvia, Tom Totton, Tom Whittemore, and Jerry Wilson showed cool astro stuff to 378 visitors.

AU outreach volunteers were at it again in 2016! As of the newsletter deadline we are at 219 events for the year, with attendance of 15,243. Again this year, over 30 members earned membership extensions. Remember, just help out at six AU outreach events in a year, and your membership gets extended a year, for free!

### JANUARY OUTREACH EVENTS

Here’s what’s scheduled so far for January. Remember, events are subject to change, so for the latest updates, contact Chuck at 964-8201 or [macpuzl@west.net](mailto:macpuzl@west.net).

The Telescope Workshop meets on Tuesday evenings at 7:30 PM at the Broder Building at SBMNH. Contact Tim Crawford at [tcrawf3@cox.net](mailto: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.

### TUESDAY, JANUARY 3, 7 PM

Telescope Tuesday at the Camino Real Marketplace in Goleta. We set up in the plaza by the theater. Note that Telescope Tuesday will be the first Tuesday of each month for 2017.

### FRIDAY, JANUARY 6, 7 PM

Our first monthly meeting of the year in Farrand Hall at SBMNH. Hear about rocky planet geology.

### SATURDAY, JANUARY 7, SETUP 4:30 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 east of the main entrance.

SATURDAY, JANUARY 14, 5 PM

Monthly AU planning meeting in the classroom outside Javier's office. Come help your club plan our activities for the coming year.

SATURDAY, JANUARY 14, 7 PM

Monthly SBMNH Star Party. Bring a scope, or just come out and mooch some views of the winter sky.

THURSDAY, JANUARY 19, SETUP 5 PM

Telescopes for Science Night at Brandon School, at 195 Brandon Drive in Goleta. We set up in their central courtyard. Buffet food for volunteers.

FRIDAY, JANUARY 20, SETUP 6 PM

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

THURSDAY, JANUARY 26, SETUP 4:30 PM

Telescopes for Science Night at Monte Vista School, at 730 North Hope Avenue. We set up on the south side of the campus, near the kindergarten playground. Pizza for volunteers.

SATURDAY, JANUARY 28, SETUP 5 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 east of the main entrance.

Looking Back

Editor's note: We take another look at a book I enjoyed when I was just getting into amateur astronomy. This month's installment comes from "Starlight Nights" by Leslie Peltier – an ardent variable star observer and comet hunter. This selection is taken from Chapter 3 – "The Comet Year."

In 1910, all over the world, curious and often fearful eyes were turned to the heavens. There was much to see and ponder. In the middle of January a comet, known simply as 1910a, unannounced by any trumpets of the sky, came suddenly from behind the sun. On January 18 astronomers at Lick Observatory in California saw it at midday just east of the sun and estimated its brightness as exceeding even that of the planet Venus, which was only a short distance away. Here on the farm, by the time we learned of the comet from our twice-a-week newspaper it had moved much to the east and north and its light was considerably diminished, though it was still quite conspicuous in the western sky and our entire family watched it for many nights. I still have a vivid mental picture of this comet just as I

saw it then, through the leafless branches of the young walnut trees near our house. The trees have long since grown to man's estate but the image has not aged. From it and a host of other images of later comets my mind's eye can estimate with confidence that when we saw it then, the object was still of first magnitude and I can still see that long feathery tail that curved upward to the east and south.

In almost any other year Comet 1910a would have been justly acclaimed as a magnificent comet, but in that spring of 1910 the world was anxiously awaiting the arrival of Halley's Comet, the most famous comet of them all and the first one definitely known to be periodic. Previous to the appearance of a bright comet in the year 1682 all comets were believed to be strangers from the depths of space who, in passing, paid the sun a brief visit and then departed never to return. The man who completely unmasked the visitor of 1682 and forced it, and a host of other comets as well, to reveal their solar family ties was the famous English astronomer, Edmund Halley, one of the great observers of all time and a genius of the highest order.

By his accurate observations of the comet that year Halley was able to show that it was traveling in an elliptical orbit. Since an ellipse is a closed orbit this meant that eventually the comet would return and that, like the planets, which also travel in elliptical orbits, it too was a captive of the sun. He determined that the period of the comet to be about seventy-six years and predicted that it would return in 1758 or 1759.

During the course of all this investigation Halley noted that similar bright comets had previously appeared in 1607 and 1531. As all of these dates were separated by the same interval of seventy-six years he announced that they all were apparitions of the same comet but that final proof would have to wait until the predicted next return.

On December 25, 1758 the comet made its reappearance, though Edmund Halley was not there to see his Christmas present to the world. He had died sixteen years before at the age of eighty-five, after a long and useful life of service to astronomy and to humanity as well.

Two trips later we watched the comet from the farm. At this latest return it had been sighted by large telescopes as early as September 1909 while it was still far, far out in space and during the months that followed it had been approaching the sun with ever-increasing speed.

Here on earth the majority of those who knew of the coming event awaited its arrival with eager anticipation. But there were others, the timid and the superstitious, who followed the nightly advance of the comet with dread, refusing to accept the common knowledge that the visitation would be but a repetition of what was known to have occurred at seventy-six year intervals ever since the object was first recorded in 240 B.C. Suicides were said to have been numerous that spring. Many persons disposed of their property in anticipation of the end of the world and the hellfire preachers made the most of a visible sign in the heavens. It was truly a noble comet and, though seen best from the earth's Southern Hemisphere, even here we saw it well, both in the east before sunrise and, a few nights later, in the western evening sky. For us it was a more spectacular comet than 1910a had been but, nevertheless, I still have a more vivid mental image of the earlier comet because of the greater impact of a first impression. They both are cherished memories.

#### Parting Thoughts...

Strange is our situation here upon earth, Each of us comes for a visit, not knowing why, yet sometimes seeming to divine a purpose from the standpoint of daily life, However, there is one thing we know: That people are here for the sake of other people... Above all, for those upon whose smile and well being our own happiness depends, and also for the countless unknown souls with whose fate we are connected by a bond of sympathy. Many times a day I realize how much my own outer and inner life is built on the labors of other people, both living and dead, and how earnestly I must exert myself in order to give in return as much as I have received. And I am still receiving.

*Albert Einstein*

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

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## January 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 CAMINO REAL MARKETPLACE 7PM	4	5	6 AU GENERAL MEETING 7PM	7 LOS FLORES RANCH PARK 4:30PM
8	9 TECH TALK KZSB (AM 1290) 9-10AM	10	11	12	13	14 PLANNING MEETING 5PM STAR PARTY 7PM SBMNH
15	16	17	18	19 BRANDON SCHOOL 5PM	20 WESTMONT COLLEGE 6PM	21
22	23 TECH TALK KZSB (AM 1290) 9-10AM	24	25	26 MONTE VISTA SCHOOL 4:30PM	27	28 LOS FLORES RANCH PARK 5PM
29	30	31				

### The Astronomical Unit

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