



AU AstroNews

The Newsletter of the Astronomical Unit

March 2017

Sponsored by the Santa Barbara Museum of Natural History



“Oops!” Photo credit: T. Totton.

THE MARCH GENERAL MEETING

Our speaker for the meeting will be Charlotte Mason, a PhD candidate in Astrophysics at UCLA and a NASA Earth and Space Science Fellow. Her research focuses on the evolution of galaxies in the early universe. She received an MA in Physics from UCSB, and was an undergraduate in Physics at the University of Oxford, UK. The title of her talk is “Galaxies at Cosmic Dawn.”

OUTREACH SUMMARY

Lots of cloudouts last month, but at least we got rain! AU volunteers Farshad Barman, Krissie Cook, Tim Crawford, Coni Edick & Joe Doyle, Art Harris, Pat & Chuck McPartlin, Janet & Martin Meza, Bruce Murdock, Edgar Ocampo, Peggy O’Rork, Tom Totton, Tom Whittemore, and Jerry Wilson managed to show the sky to 795 viewers.

MARCH OUTREACH EVENTS

Here are the AU events scheduled for March. To get the latest information on schedules, or directions, just contact Chuck at 964-8201 or macpuzl@west.net. Remember, events are subject to cancellations and changes.

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.

THURSDAY, MARCH 2, SETUP 4:30 PM

Telescopes for Science Night at El Camino School, 5020 San Simeon Drive in Goleta.

FRIDAY, MARCH 3, 7 PM

Monthly AU meeting in Farrand Hall at SBMNH.

SUNDAY, MARCH 5, SETUP 6 PM

Star party at Westmont Observatory for the Santa Barbara Power Squadron.

TUESDAY, MARCH 7, 7 PM

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

WEDNESDAY, MARCH 8, SETUP 4:30 PM

Telescopes for Science Night at Monroe School, 431 Flora Vista Drive, on the Mesa.

THURSDAY, MARCH 9, SETUP 5 PM

Telescopes for Science Night at Hollister School, 4950 Anita Lane, in Noleta. We enter through a gate on the east side of the playground off Ashton Street.

SATURDAY, MARCH 11, 5 PM

AU planning meeting in the classroom outside Javier's office at SBMNH. All members are welcome to help plan your club's activities.

SATURDAY, MARCH 11, 7 PM

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

SUNDAY, MARCH 12, 2 AM

Don't forget to switch to Daylight Saving Time!

WEDNESDAY, MARCH 15, SETUP 6 PM

Telescopes for an Astronomy Night at La Colina Junior High School, 4025 Foothill Road. We set up to the east of the buildings.

THURSDAY, MARCH 16, SETUP 5:30 PM

Telescopes for Science Night at Santa Barbara Charter School, on the east end of the campus of Goleta Valley Junior High, 6100 Stow Canyon Road in Goleta.

FRIDAY, MARCH 17, 7 PM

Monthly Public Telescope Night at Westmont College observatory. Look through the big scope!

MONDAY, MARCH 20, 3:29 AM PDT

Vernal Equinox - It's Spring!

SATURDAY, MARCH 25, ALL NIGHT

Messier Marathon at the Winchester Canyon Gun Club Shotgun Range. Do not arrive to set up before 8 PM, as the range is in use.

From the President...
Fellow SBAU members:

At our administration meeting of February 11 we discussed the status of our inventory of SBAU logo clothing. We are deciding where we stand in preparation for ordering needed items. These items include short and long sleeve t-shirts, zippered and pull over sweatshirts, hats, tote bags and the coveted SBAU coffee mugs. If you've been holding off until we re-order now is the time to tell us. Send your information (item and size) to Treasurer@sbau.org. Color logos may be available on some items.

The club is still in need of a volunteer to act as Secretary. The duties are: mail out the newsletter hard copies and take minutes at the administrative meeting on the second Saturday of each month. You will be treated to stimulating companionship and conversation as well as free pizza and usually chocolates (thanks to Edgar).

As many of you know we have a Telescope Workshop on Tuesday evenings from 7:30 to 9:00 PM in Broder Hall. I think there is some confusion about the workshop to the effect that all we do is grind mirrors. In fact, we cover virtually every aspect of our hobby. We do assist people with their mirror making projects, but we also show people how to design, build, and operate their telescope and mount, whether they made it or bought it. Also what equipment they may need to take images through their telescope or of the night sky using just their camera. We also instruct on how to process

images to give the best possible results, whether they want to manually tune each step or rely on the increasing availability of automatic processing software. If you are interested, please send an email to one of us (Tim Crawford, Tom Whittemore, Jerry Wilson; or for hands on image-processing, Paul Winn) so we can bring in the appropriate equipment or tools. Our emails are on the web site.

And finally, the Astro-question of the month: When a star condenses from the primordial dust cloud how is it that the angular momentum does not spin up the protostar until it flies apart? In other words, the cloud starts with some rotation, and just like a figure skater pulls her arms in when she wants to speed up her spin, the dust disk rotation will speed up as the material condenses into a star.

Jerry Wilson

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 11 – "June Spectacular." June 8, 1918 is a date I shall never forget, on this day, in late afternoon, the shadow of the moon would march across America. Once again I would see but a partial eclipse, in most respects a duplicate of the one I had watched through a smoked glass from the country schoolyard just three fields and a woods away. But that was long ago and I knew that I had missed many details of that first event. For the past several months I had been reading about the coming spectacle. It would be a total eclipse in a narrow belt, not more than sixty miles wide, running diagonally all the way across the country from the state of Washington to Florida. On either side of this line would be another belt of two thousand miles wide in which the eclipse would be only partial. Here in Ohio, more than five hundred miles north of the line of totality the sun would be about 75 per cent covered by the moon. It would be the first total eclipse of the twentieth century in the United States and in spite of wartime restrictions and in spite of the fact that many astronomers were in active service – some at the front, others doing computing and teaching navigation – nevertheless it promised to be the most completely observed eclipse in history. Most of the eclipse expeditions were setting up their camps along the western end of the totality path – for a

number of reasons. There the duration of totality would be at its greatest. In Washington and Oregon the sun would be covered by the moon's disk for a full two minutes, in Oklahoma for a minute and a half, while in Florida it would last slightly under one minute. But totality duration is only of secondary importance compared to that always uncertain atmospheric factor – clouds. Many an eclipse expedition has traveled halfway around the world, spent weeks in setting up elaborate equipment and rehearsing its carefully planned program, only to have a cloud drift across the sun just before totality. A site is not selected until its shady past is thoroughly investigated and its cloudy-sky percentages for that particular day and hour in former years are carefully weighed and compared with those of all other possible sites. Here again, the more arid West was heavily favored. One final advantage of the West was that the eclipse would begin there a full forty-five minutes before it would arrive in the East and the sun would therefore be higher in the sky and less affected by the heavy atmosphere of the horizon.

Even though some certain locality along the path seems to offer superlative advantages over all others it would be the height of folly for all parties to settle there and gamble everything on the whim of some tiny cloud. Whenever it is at all possible the various camps are strung out along the path so that some of them, at least, may be successful. The party from Lick Observatory located at Goldendale, Washington. At Baker, Oregon, was the Naval Observatory camp, while both Yerkes and Mt. Wilson decided on Green River, Wyoming, for their stations. In addition to these a large number of smaller parties located in central and eastern Colorado.

In reading up on eclipses in preparation for the coming event I learned that from two to five solar eclipses visit the surface of our planet each year. However, some of these may be only partial while others, though total, may strike the earth in inaccessible regions such as the poles or their line of totality may fall entirely on the vast surface of the sea. On the average the astronomers can expect a good observable total eclipse of the sun about every third year. I learned, too, that any particular spot on the earth might look forward to such an eclipse once every 360 years. This too is just an average for some localities seem to be much more

fortunate than others. Denver, Colorado, for example lay right in line with the coming June 8 blackout and only forty years before, in 1878, it had also been in the path of a previous totality. At the other extreme I could find no record that our farm had enjoyed any such solar spectacle within historic times and certainly there will be none within the present century. To be continued...

AU Information Box

President: Jerry Wilson 968-4056
jerryawilsonphd@gmail.com

Vice President: Adrian Lopez 898-9971
vicepresident@sbau.org

Secretary: VACANT, temp is Colin

Treasurer: Colin Taylor 967-8140
dancingmagpie@cox.net

Equipment: Art Harris 968-4017
n6is@cox.net

Outreach: Chuck McPartlin 964-8201
outreach@sbau.org

Newsletter: Tom Whittemore 687-2025
kometes@aol.com

Refreshments: Tom Totton
tomcez@cox.net

Webmaster: Paul Winn 886-2319
webmaster@sbau.org

SBMNH Astronomy Programs Manager

Javier Rivera 682-4711x173
jrivera@sbnature2.org

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AU mailing address:

Astronomical Unit
 c/o Santa Barbara Museum of Natural History
 2559 Puesta Del Sol Road
 Santa Barbara, CA 93105-2998

On the Web: <http://www.sbau.org>

March 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2 EL CAMINO SCHOOL 4:30PM	3 AU GENERAL MEETING 7PM	4
5 WESTMONT COLLEGE 6PM	6	7 CAMINO REAL MARKETPLACE 7PM	8 MONROE SCHOOL 4:30PM	9 HOLLISTER SCHOOL 5PM	10	11 PLANNING MEETING 5PM STAR PARTY 7PM SBMNH
12 DAYLIGHT SAVING TIME!	13 TECH TALK KZSB (AM 1290) 9-10AM	14	15 LA COLINA JHS 6PM	16 SB CHARTER SCHOOL 5:30PM	17 WESTMONT COLLEGE 6PM	18
19	20 VERNAL EQUINOX!	21	22	23	24	25 MESSIER MARATHON ALL NIGHT
26	27 TECH TALK KZSB (AM 1290) 9-10AM	28	29	30	31	

The Astronomical Unit
 c/o Santa Barbara Museum of Natural History
 2559 Puesta Del Sol Road
 Santa Barbara, CA 93105-2998