



THE LOS ANGELES ASTRONOMICAL SOCIETY

THE BULLETIN

DECEMBER, 2018
VOLUME 92, ISSUE 12



NGC 2264 - Cone Nebula and Christmas Tree Cluster - Nov. 17, 2018

NGC 2264 designates both the Cone Nebula and the Christmas Tree Cluster, related objects appearing in the constellation Monoceros. Nasir took the photo at our dark sky site in Lockwood.

Photo Credit: Nasir Jeevanjee

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There will be no General Meeting in January in lieu of the Banquet. Please visit Page 9 to learn more about the Annual Banquet and Awards Ceremony.

If you are not signed up for the "Home" IO group, you will no longer receive general announcements as you did from the Yahoo-ANC group. Contact our club Secretary for further information at secretary@laas.org.

LAAS Election and December General Meeting Information

General Meeting - Show N' Tell Meeting

Date: Monday, Dec. 10, 2018

Time: 7:30 PM to 9:45 PM

Location: Griffith Obs.

Our general meeting in December is a unique meeting. **Show N' Tell** - Once a year, the members of our club are invited to be guest speakers and share presentations of their own. Talk about your telescopes, travels, astro-photography techniques, inventions or discoveries, or anything else you think the club would find of interest. Bring a slide show, photographs, videos or audio files to share with the members at the meeting. If you have an idea for a presentation, please contact Tim Thompson at timthompson3@verizon.net.

Club Election

Members attending the meeting may fill out ballots and vote. Members will receive ballots sent by email which can be filled out electronically and submitted online. These will be sent out a week or so before the election along with the rules. If you are not using the new *IO groups* for club communication, contact the club secretary at secretary@laas.org.

Members will cast votes for the following club official positions:

President

Vice President

Treasurer

Club Secretary

Members will also vote for the Board of Directors. You may vote for up to eight Board members and one alternative, who will take the place of any Board member, when necessary.

Only members who have been in the club for one full year are permitted to run for the Board. Once a Board member has served the club for one year, they may be elected to serve as one of our club officials.

A message from Spencer SooHoo/Club Secretary : I will be sending out a ballot via email on Dec 2nd and received by Dec 8th so I can tally them at the general meeting on the 10th.





Stop by the Garvey Ranch Observatory on December 12th for our annual holiday party and potluck. Bring along some holiday decorations, festive food, and holiday cheer to share good tidings with friends and family. The party will be held in the classroom next door to the observatory. We always have a great table of food for all and your offerings are greatly appreciated by all attendees. Friends and family members are welcome to attend.

'TIS THE SEASON!

Comet Wirtanen

by David Nakamoto

Comet Wirtanen, periodic comet 46P, will have a once in a lifetime passage close to earth in December of 2018. This is due to two events, a few days apart, that will make the comet brighter than it usually is.

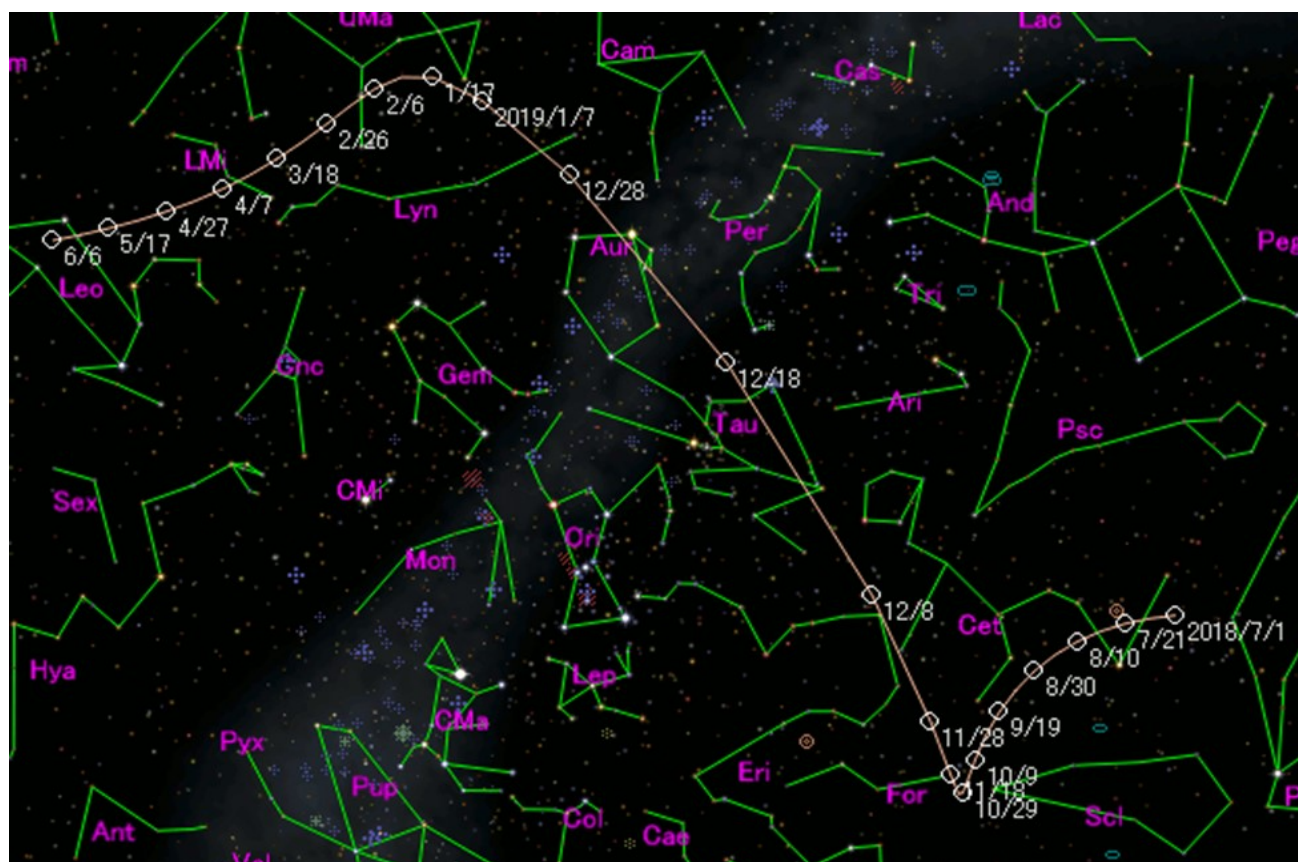
December 12th -- Wirtanen will be closest to the Sun, perihelion. It will be as bright as it can get, if it follows its behavior during past perihelion passages.

December 16th -- Wirtanen will be closest to the earth, only 11.5 million km or 7.1 million miles away. This will also contribute to making it as bright as it can get, for observers on earth anyway.

This coincidence of a perihelion passage followed by a close approach mimics Mars' opposition in July of this year. Now when Mars did this, a global dust storm conspired to make Mars' globe a bland featureless disk. However, we want Wirtanen to produce lots of dust and gas, which will make it reflect more sunlight, so the comet will become bright. Some estimates predict Wirtanen might reach magnitude 4. But comets are notoriously unpredictable, so it might become even brighter, or it might even fade. Since no one knows which way it goes, this is not a comet to miss. No other comet is predicted to be brighter than 8th mag in 2019.

Since no one knows what will happen, I urge observers to look frequently and often as the comet goes from the southern skies to the north. It actually becomes visible all night as it passes by the earth. Remember, nothing in the sky waits for anyone. Small scopes, binoculars, anything that is easy to use at a moment's notice is better than nothing, so make the most of every chance you can get.

Below is a star chart showing the path of the comet. Notice that at perihelion Dec 12th and closest approach on the 16th, the comet is fairly high in the sky just west of Taurus the Bull. Late December and early January it passes Lynx and heads towards Ursa Major, going circumpolar in the process and so appearing all night.



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Based to the light curve made up of observed magnitudes, Wirtanen is behaving according to predictions, so 4th mag appears to be possible.

What will we see ? Well, Wirtanen will travel alongside earth during the close encounter, and going in the same direction. This means the passage won't be a quick one, but will last for several weeks. Since the tails point away from the Sun, and the comet is almost opposite the Sun during the encounter, we're looking at the part of the comet pointed towards the Sun and earth, with the tails trailing away from the earth. This might mean the dust tail might be short, and the plasma tail even shorter. On the other hand, before closest approach, we'll be looking "down" on the comet, and after we'll be "below" it looking "up" at it. Both tails might be long at these times. The only way to be sure is to look at Wirtanen with anything you have.

The ephemeris below was generated by <in-the-sky.org>. As with all comet magnitude estimates, your mileage may vary, but LOOK !

Happy Hunting !

David Nakamoto can be reached at dinakamoto@hotmail.com.

Ephemeris for 46P/Wirtanen										
Date	Age of Moon	Right Ascension	Declination	Rise	Culm	Set	Approx Mag.	Constellation		
2018	Dec 01	24 days	02 ^h 25 ^m 08 ^s	-20°16'38"	16:29	21:34	02:43	6.0	Cetus	
2018	Dec 03	25 days	02 ^h 28 ^m 16 ^s	-18°42'51"	16:23	21:33	02:47	5.9	Cetus	
2018	Dec 04	26 days	02 ^h 31 ^m 39 ^s	-16°59'45"	16:17	21:32	02:51	5.8	Cetus	
2018	Dec 05	27 days	02 ^h 35 ^m 19 ^s	-15°06'24"	16:11	21:32	02:57	5.7	Cetus	
2018	Dec 06	28 days	02 ^h 39 ^m 18 ^s	-13°01'53"	16:05	21:32	03:03	5.6	Cetus	
2018	Dec 07	29 days	02 ^h 43 ^m 38 ^s	-10°45'15"	15:59	21:32	03:10	5.5	Cetus	
2018	Dec 08	00 days	02 ^h 48 ^m 19 ^s	-08°15'40"	15:53	21:33	03:17	5.4	Eridanus	
2018	Dec 09	01 days	02 ^h 53 ^m 24 ^s	-05°32'23"	15:47	21:34	03:26	5.3	Eridanus	
2018	Dec 10	02 days	02 ^h 58 ^m 55 ^s	-02°34'54"	15:40	21:36	03:35	5.2	Eridanus	
2018	Dec 11	03 days	03 ^h 04 ^m 53 ^s	+00°37'01"	15:33	21:38	03:46	5.1	Cetus	
2018	Dec 12	04 days	03 ^h 11 ^m 22 ^s	+04°02'59"	15:27	21:40	03:58	5.0	Cetus	
2018	Dec 13	05 days	03 ^h 18 ^m 23 ^s	+07°42'03"	15:20	21:43	04:11	4.9	Cetus	
2018	Dec 14	06 days	03 ^h 25 ^m 58 ^s	+11°32'31"	15:12	21:47	04:26	4.9	Taurus	
2018	Dec 15	06 days	03 ^h 34 ^m 10 ^s	+15°31'52"	15:05	21:51	04:42	4.8	Taurus	
2018	Dec 16	07 days	03 ^h 43 ^m 01 ^s	+19°36'45"	14:57	21:56	04:59	4.8	Taurus	
2018	Dec 17	08 days	03 ^h 52 ^m 31 ^s	+23°43'22"	14:49	22:02	05:18	4.8	Taurus	
2018	Dec 18	09 days	04 ^h 02 ^m 44 ^s	+27°47'22"	14:41	22:08	05:39	4.8	Taurus	
2018	Dec 19	10 days	04 ^h 13 ^m 38 ^s	+31°44'37"	14:32	22:15	06:02	4.8	Perseus	
2018	Dec 20	11 days	04 ^h 25 ^m 13 ^s	+35°31'05"	14:23	22:23	06:26	4.9	Perseus	
2018	Dec 21	12 days	04 ^h 37 ^m 29 ^s	+39°03'39"	14:13	22:31	06:53	4.9	Perseus	
2018	Dec 22	13 days	04 ^h 50 ^m 21 ^s	+42°19'47"	14:02	22:40	07:21	5.0	Auriga	
2018	Dec 23	15 days	05 ^h 03 ^m 47 ^s	+45°17'53"	13:51	22:49	07:52	5.1	Auriga	
2018	Dec 24	16 days	05 ^h 17 ^m 41 ^s	+47°57'13"	13:38	22:59	08:24	5.2	Auriga	
2018	Dec 25	17 days	05 ^h 31 ^m 54 ^s	+50°17'47"	13:23	23:09	09:00	5.3	Auriga	
2018	Dec 26	18 days	05 ^h 46 ^m 20 ^s	+52°20'06"	13:04	23:20	09:39	5.4	Auriga	

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2018	Dec	27	20 days	06°15'14"	+55°34'09"	Circumpolar	5.6	Auriga
2018	Dec	29	21 days	06°29'24"	+56°48'36"	Circumpolar	5.8	Lynx
2018	Dec	30	22 days	06°43'12"	+57°49'59"	Circumpolar	5.9	Lynx
2018	Dec	31	23 days	06°56'29"	+58°39'49"	Circumpolar	6.0	Lynx
2019	Jan	01	24 days	07°09'13"	+59°19'34"	Circumpolar	6.1	Lynx
2019	Jan	02	25 days	07°21'16"	+59°50'33"	Circumpolar	6.2	Lynx
2019	Jan	03	26 days	07°32'38"	+60°14'01"	Circumpolar	6.4	Camelopardalis
2019	Jan	04	27 days	07°43'17"	+60°31'05"	Circumpolar	6.5	Camelopardalis
2019	Jan	05	28 days	07°53'12"	+60°42'44"	Circumpolar	6.6	Camelopardalis
2019	Jan	06	29 days	08°02'23"	+60°49'47"	Circumpolar	6.7	Camelopardalis
2019	Jan	07	00 days	08°10'53"	+60°52'58"	Circumpolar	6.8	Ursa Major
2019	Jan	08	01 days	08°18'43"	+60°52'56"	Circumpolar	6.9	Ursa Major
2019	Jan	09	02 days	08°25'55"	+60°50'09"	Circumpolar	7.0	Ursa Major
2019	Jan	10	03 days	08°32'31"	+60°45'06"	Circumpolar	7.1	Ursa Major
2019	Jan	11	04 days	08°38'33"	+60°38'08"	Circumpolar	7.3	Ursa Major
2019	Jan	12	05 days	08°44'05"	+60°29'33"	Circumpolar	7.4	Ursa Major
2019	Jan	13	06 days	08°49'08"	+60°19'36"	Circumpolar	7.5	Ursa Major
2019	Jan	14	07 days	08°53'44"	+60°08'31"	Circumpolar	7.6	Ursa Major
2019	Jan	15	08 days	08°57'56"	+59°56'28"	Circumpolar	7.7	Ursa Major
2019	Jan	16	09 days	09°01'45"	+59°43'35"	Circumpolar	7.8	Ursa Major
2019	Jan	17	10 days	09°05'14"	+59°30'01"	Circumpolar	7.9	Ursa Major
2019	Jan	18	11 days	09°08'25"	+59°15'49"	Circumpolar	8.0	Ursa Major
2019	Jan	19	12 days	09°11'18"	+59°01'06"	Circumpolar	8.1	Ursa Major
2019	Jan	20	13 days	09°13'55"	+58°45'56"	Circumpolar	8.2	Ursa Major
2019	Jan	21	14 days	09°16'17"	+58°30'21"	Circumpolar	8.3	

2019	Jan	22	16 days	09°20'23"	+57°58'10"	Circumpolar	8.5	Ursa Major
2019	Jan	24	17 days	09°22'09"	+57°41'38"	Circumpolar	8.6	Ursa Major
2019	Jan	25	19 days	09°23'45"	+57°24'48"	Circumpolar	8.7	Ursa Major
2019	Jan	26	20 days	09°25'11"	+57°07'45"	Circumpolar	8.8	Ursa Major
2019	Jan	27	21 days	09°26'29"	+56°50'27"	Circumpolar	8.9	Ursa Major
2019	Jan	28	22 days	09°27'40"	+56°32'55"	Circumpolar	9.0	Ursa Major
2019	Jan	29	23 days	09°28'43"	+56°15'11"	Circumpolar	9.0	Ursa Major
2019	Jan	30	24 days	09°29'40"	+55°57'13"	Circumpolar	9.1	Ursa Major
2019	Jan	31	25 days	09°30'31"	+55°39'04"	Circumpolar	9.2	Ursa Major
2019	Feb	01	26 days	09°31'17"	+55°20'42"	Circumpolar	9.3	Ursa Major
2019	Feb	02	26 days	09°31'59"	+55°02'10"	13:07 00:39 12:08	9.4	Ursa Major
2019	Feb	03	27 days	09°32'36"	+54°43'26"	13:19 00:36 11:50	9.5	Ursa Major
2019	Feb	04	28 days	09°33'10"	+54°24'32"	13:27 00:33 11:35	9.6	Ursa Major
2019	Feb	05	00 days	09°33'41"	+54°05'27"	13:33 00:29 11:22	9.7	Ursa Major
2019	Feb	06	00 days	09°34'09"	+53°46'12"	13:38 00:26 11:10	9.8	Ursa Major
2019	Feb	07	01 days	09°34'34"	+53°26'48"	13:42 00:22 10:59	9.9	Ursa Major
2019	Feb	08	02 days	09°34'58"	+53°07'15"	13:45 00:19 10:49	10.0	Ursa Major
2019	Feb	09	03 days	09°35'20"	+52°47'33"	13:48 00:15 10:39	10.1	Ursa Major
2019	Feb	10	04 days	09°35'40"	+52°27'44"	13:50 00:12 10:29	10.2	Ursa Major
2019	Feb	11	05 days	09°36'00"	+52°07'46"	13:52 00:08 10:20	10.2	Ursa Major
2019	Feb	12	06 days	09°36'18"	+51°47'42"	13:53 00:04 10:11	10.3	Ursa Major
2019	Feb	13	07 days	09°36'35"	+51°27'31"	13:55 23:57 10:03	10.4	Ursa Major
2019	Feb	14	08 days	09°36'52"	+51°07'14"	13:56 23:53 09:54	10.5	Ursa Major
2019	Feb	15	09 days	09°37'09"	+50°46'52"	13:57 23:50 09:46	10.6	Ursa Major
2019	Feb	16	10 days	09°37'25"	+50°26'25"	13:57 23:46 09:38	10.7	Ursa Major

The Okie-Soakie Rain, Drizzle and Mud Pie Party

By Jack Eastman

Well, once again, as Fall falls it's time for the annual expedition to the wilds of the Oklahoma Panhandle, Kenton and Camp Billy Joe, for the Okie-Tex Starparty. Eight nights under pristine un-light polluted skies for spectacular views of the night sky.

The festivities were to start Saturday, October 6 and finish up Saturday, Oct. 13 with the camp closing the following morning. Several of us had our beards pulled to arrive the previous Thursday and be part of the camp setup party, I took off from Denver Wednesday, hot! 97-degrees, stayed in Boise City that night. Got up the next morning to overcast and some 40-sh degree temperature! A bit of a shock! It was on to the camp and help getting food, kitchen implements, tables & chairs in place and laying out power lines and marking the "roads" That night it had cleared up and I set up the 25X100 binoculars and the "Levy" 6-inch Maksutov-Newt on the new (to me) equatorial purchased at last year's Okie swap meet. I bore sighted the polar axis of the Clark tripod and then spent a pleasurable night of observing with the 25X100s and "Levy". Sky was good, but deteriorated a bit during the night. Sky Quality Meter (SQM) reading of 21.55 and a low temperature of 50-F. Friday, after more setting up and such, was a beautiful pristine sky! Milky way with the wide-field 'scopes was a sight to behold. Tony White's (Tulsa) friend and very good meteorologist said a front was gonna come through around 11:20-ish. He missed it by about 10 minutes! Wind shifted and blew all the harder, and the temperature fell precipitously! Overnight low went to 45-F Not really all that bad. (Lowest temperature was Wednesday night, the 10-th, down to 34. The rest averaged the upper 40s. Very livable), nowhere like the 11-F and colder at the Riverside get together (RTMC) of 2008! Saturday morning, the 6th and official start of the star party, cloudy. And it all went downhill from there. Threats of rain, but clearing "Tomorrow." It did rain that evening and "tomorrow" never came.

Seven soggy, wet nights and copious mud were to come. So, it was the "Okie-Soakie Rain, Drizzle and Mud Pie Party. End of things observational, indeed! We even got a tad of hail. Our intrepid Oklahoma City Astronomers, tasked with planting the pink flamingo Okie-Tex mascots, Okie and Tex, upon the overlooking rocks were doing their duty when the hail came! I suggested replacing the flamingos with ducks! Many folks cancelled with the threat of yucky (highly technical meteorological term) weather from a couple of ongoing hurricanes and quite a few left early, several with big RVs getting stuck in the mud. The County Road Grader was summoned and fished several out of the mud, and stuck around in case more needed help.

The gastronomical part of this was, once again, excellent at the hands of Jody Risley and her hard working kitchen crew kept us well fed and well grunted, indeed.

While a number of scheduled talks were cancelled, there were still several. Saturday evening, John Carson from Bent's Fort, La Junta, CO, great grandson of the legendary Kit Carson, put on a presentation "Santa-Fe Trail Celebration" telling of Life on the Santa-Fe Trail in the early 1800's.

Tuesday brought the traditional swap meet, this time held in the "Big Top", as the bunkhouse patio was rather wet, cold and generally unpleasant!

Wednesday, Randy Shivak "My Solar Life and Solar Imaging talked about the Sun and his rather good images, showing a number of features in white and H-alpha light. He was followed by John O'Neay "Nyquist theory and Seeing" discussing the limits of resolution and the matching of resolution elements with the telescope's diffraction limit. That evening Howard Brewington "Let There Be Light, Man's Quest for Global Illumination," discussed light pollution and its unbridled growth. Rather scary for those of us who really want dark skies!

Thursday, John O'Neal "Parker Solar Probe," the recently launched probe to the very near vicinity of our own star, the Sun. Then it was Mike Lockwood "Fun With Optical Measurements " & "Telescope Performance & Modern Design," excellent discussion of modern interferometric optical testing and optical designs. Val Germann then talked about "Astronomy on the Santa-Fe and Oregon Trails" the use of celestial navigation techniques for mapping this unknown territory.

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Door prize drawings were scheduled, as before, for Thursday evening and again Saturday. We combined them, after the first go, names all went back in the barrel and the second (Saturday's) part executed. According to the list of registrants, there were 47 folks there from Colorado, 29 from the Denver club. For several, this was their first Okie-Tex. What an introduction! There were two from California, Orange County and San Diego and from the Oklahoma City club, the ones who put on this event, there were 66 on the list. Possibly a fair number cancelled due to the threat of bad weather and quite a few left early when that threat came true!

The final Friday, Oct. 12, amazingly enough was cloudy but dry! Later in the day the clouds broke up somewhat and we actually saw the Sun! Wisdom suggested tear down and pack up, especially as the prognostication was for more precipitation overnight into Saturday. I had my beard severely pulled to stay set up as a number of folks, including several young students who were a part of Jody's kitchen crew really wanted to see some stars! I checked six weather prognostications, two said "more rain" the other four said "cloudy but dry" I kept the 'scopes up, and although the sky was not perfect I was able to show Mars and Saturn with the Clark and M-31, Andromeda, the Perseus Double Cluster and the Pleiades. with the 6-inch "Levy" Maksutov-Newt. Saturday morning, it stayed dry, and the packup proceeded without any trouble.

The Oklahoma folks decided to close up the camp a day early. On Saturday, all buildings were locked up but the porta-potties and big tent would stay 'till Sunday. I took off Saturday afternoon, seems like one staunch holdout, Charles Holmberg?? from Arkansas who really wanted to see Milky Way under clear conditions, decided to stick it out. When I left, the sky looked as pristine as ever, deep sapphire blue, indicating the potential for a great night. (???) There was a threat of snow and cold for Saturday night. Bad, the county road grader that fished several RVs outta the mud over the previous few days would not be there Sunday. Hope Charlie didn't get stuck! Decision? Get a room in Boise City, get rested and head out, or gopherit Truly snotty (another highly technical meteorological term) weather forecast for Sunday. Got the room. Looked like clouds moving in, hope Charlie didn't get skunked or stuck!

Homeward, a mixture of drizzle, cold, snizzle and icy-dicey spots between to CO border and Lamar. Gal at Villnueva (great Taos Enchiladas with all the trimmings) said road seemed open to the North, (Limon and I-70) but was closed South (where I just had come from (??)). Rest of trip cold but dry. Got home Sunday to a couple of inches of snow. That night my max-min said it got down to 18-F Brrr again! Far cry from the 97 on my trip out! Oven-to-freezer! Brrr!! Gotta keep a positive attitude, next year it's gotta be better! And, just think, the wildfire danger was really, really low! Yes, plan on all this again for '19 hopefully without all the meteorological "fun".

From a short announcement about Okie Tex in Oklahoma Tourism for Sept. 12, Yours Truly holding the Joe Meyers 23.4-mm Newtonian, (Celestron 0.8, probably the world's smallest). Other 'scopes, my 40-mm Newt and the 141-year old Alvan Clark refractor.

Photo Credit: Chris Wilkinson



YOU ARE INVITED TO

*The LAAS Annual
Banquet and
Awards Ceremony*

Sunday, January 20, 2019
6:00 PM to 11:00 PM

The Quiet Cannon Restaurant
901 Via San Clemente, Montebello, CA 90640

Buffet Dinner, Cocktails, and Guest Speaker

LAAS Annual Banquet and Award Ceremony

Date: January 20, 2019

Time: 5 PM to 11 PM

Location: The Quiet Cannon Restaurant - Website: <http://www.quietcannon.com/>

Address: 901 Via San Clemente, Montebello, CA. 90640

Our Annual Banquet and Awards Ceremony is the club's most elegant event of the year. Please join us at the Quiet Cannon Restaurant for an incredible buffet dinner, cocktails, an amazing presentation from our guest speaker.

Awards will be presented to our outstanding club volunteers and we'll have great raffle prizes to win by the end of the night. If you would like to donate a raffle prize, please contact Spencer SooHoo, our club secretary at secretary@laas.org.

The banquet speaker will be John Mulchaey, Director of Carnegie Observatories. They are the lead organization for the Giant Magellan Telescope, and the parent organization for Mount Wilson Observatory.

<https://carnegiescience.edu/scientist/john-mulchaey>

<https://users.obs.carnegiescience.edu/mulchaey/>

Please make your reservations as soon as possible. The prices per person will increase for those who pay at the door. As we need to submit payment in advance and reserve enough tables, chairs, and food, please don't wait until any further to reserve your seats. Paying at the door always delays the event as the staff has to set up tables for all additional guests.

The prices are as follows:

Adults: \$50.00 per person - Pay at the door adults: \$55.00 per person.

Children 12 and under: \$25.00 - Pay at the door children: \$30.00 per child.

Friends and family members are always welcome to attend. Please pay for your guests and write their names on your checks or in the "comment" section of the PayPal link. Use this link to submit your reservations now: <https://fs30.formsite.com/LAAS/form12/index.html>

Please also send an email with your full name, and the names of all guests to:

Andee at communications@laas.org

You may also mail a check for you and your guests to:

LAAS

c/o Griffith Observatory

2800 E. Observatory Rd

Los Angeles, CA 90027

Attn: Treasurer/Banquet

What to wear? We want you to be comfortable! The appropriate attire is "**business-casual**."

Continued on next page

Cocktails and wine may be purchased throughout the evening.

The dinner is buffet-style and begins at 6 PM. Below is the full menu:

Salads:

Chinese Ginger Chicken Salad

Mixed Field Greens

Waldorf Salad

Fresh Seasonal Fruit

Entrees:

Roasted Chicken with Garlic, Lemon & Thyme

Beef Stroganoff

Salmon Florentine, with Spinach, Tomatoes and Garlic

Vegetable Lasagna

Vegetables:

Fresh Seasonal Vegetables

Accompaniments:

Rice Pilaf

Roasted New Potatoes

Desserts: A Variety of Cakes

Rolls, Bread, Coffee and Tea



Outreach Reports and Photos

By Van Webster

Lankershim Elementary (North Hollywood)

Date: Tuesday, November 06, 2018

Time: 5:30 PM - 7:00 PM

Three members of the Los Angeles Astronomical Society journeyed into the heart of the East Valley television and film production district on Tuesday evening, November 6, 2018 for a night of observing at Lankershim Elementary School in North Hollywood. It was election night and voters could be seen lining up in front of the IATSE office on Magnolia Blvd. to cast their ballots. This was also the first outreach event of the season during Pacific Standard Time.

The gate to the playground was opened by school principal Clarke and we set up on the northern part of the playground in order to get a good view of the southern sky. The air was just on the cusp of being crisp with a cloudless sky and some moisture in the air.

Tuesday's session was the first time the school had tried to put on an event of this type and the school administrators were a bit anxious about the number of students at this small campus would participate.

It turned out that things went extremely well. The school staff did a terrific job of organizing the students and their families so that each person had ample time at the telescopes without crowding and rushing. We were also offered a slice of pizza and a soda to stave off any hunger pangs.

The school had two small Celestron reflecting telescopes that they didn't know how to operate. One was on an alt/az mount that required a battery that they did not have. The other was mounted on a German equatorial mount of questionable stability. We tried to help them get their gear operating but our plates were so full with helping student observers that we weren't able to get the school's telescopes working.



On view for the students were Mars, Saturn, Uranus and Albireo. The seeing was pretty good. The playground lights were turned off but lighting from just outside the school property made viewing a bit of a challenge.

The turnout from the school was good and Principal Clarke is looking forward to setting up another event for next spring. We packed up our gear and were on our way shortly after 7:00 PM



Photo credit: Van Webster/LAAS

Kester Elementary (Van Nuys)

Date: Friday, November 02, 2018

Time: 6:00 pm - 8:00 pm

A goodly number of Astronomers from the Los Angeles Astronomical Society assembled on the playground of Kester Elementary School in Van Nuys on the evening of November second for a round of outreach stargazing.

The sky had high clouds making for a nice sunset but presenting a potential challenge for nighttime viewing.



The school staff provided easy access through the gate to the set up area and they gifted us with pizza and bottled water before the event began.

Early views were of Mars and Saturn as a few students came by to take a look. As the night got darker, two waves of children and families descended on the assembled telescopes. It was a good thing that we had a strong turnout of LAAS members as the lines of students were long.

Many of the 5th grade students had just returned from a 3 day astronomy camp in the local mountains. These students were very knowledgeable about the object on view. The students were also one of the more polite school groups we have served with many spontaneous "thank you's" after their turn at the eye-piece.

Just as quickly as the crowds had appeared, by 8:00 PM almost everyone from the school had left and it was up to us to pack up our gear and head out into the balmy evening.



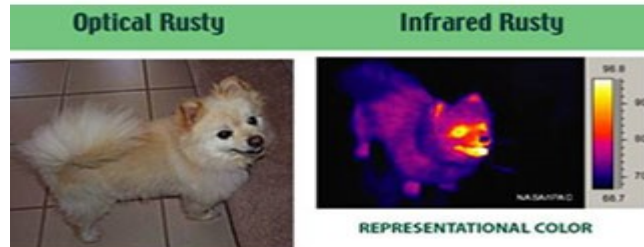
Photo credit: Van Webster/LAAS

Outreach Activity: Why Doesn't It Look Like The Photos?

The Night Sky Network (NSN)

Why Doesn't It Look Like the Photos?

CHILD, TEEN, ADULT



This set of activities provides tools to help your visitors understand the two main reasons views through the telescope do not look like photographs from NASA's space telescopes and popular astrophotographers:

- **Exposure time:** Why photographs have so much more detail than the view through the telescope.
- **Some photographs are showing representational color:** Different energies of light and why NASA needs so many different kinds of telescopes to detect that energy.

You can also watch a further exploration of this activity via the Galileo Teacher Training Program (GTTP) webinar on YouTube: <https://www.youtube.com/watch?v=cBdvPrUb76A>

[Download Activity: Why Doesn't It Look Like the Photos?](#) (PDF, 9.23 MB)

[Download Optional PowerPoint for large audiences](#) (PPT, 6.33 MB)

[Ready to Observe? activity](#)

[What Power is your Telescope? activity](#)

[Magnification vs. Resolution activity](#)

[It's All Done with Mirrors activity](#)

[GTTP Webinar: Colors of the Universe \(Activity In Depth\)](#)

Activity Video: <https://www.youtube.com/watch?v=maEpX6AliFs>

Meet The New Members



Ferris Hakoum

Matthew Benedict

Jolon Bankey and Family

Sam Hughes

Daniel Schwartz

Tony Tran

John DuGene

Jordan Albert and Vesper
Burnett

Ross Salomone

Eric Borbely

Jeffrey Lutocka

LAAS Board Meetings

Our LAAS Board Meetings take place once a month at the Garvey Ranch Park Observatory. You can find the dates for these meetings on our event calendar. All members are welcome to attend all Board meetings. These meetings begin at 8 PM.

NEW: You may listen to recorded meetings by logging in to our website at LAAS.org and clicking on the "Members Only" tab.

Before you try to access the "Members Only" information, you need to request login credentials from our Webmaster. On the left hand side of the page, scroll down and find "Login." Click "Login" for further information.

Volunteer Opportunities

Every LAAS member is a volunteer at some point. Some members volunteer to share telescopes with the public, while others tackle administrative duties, help out at our community and public events, or join a club committee. Taking photos at our events and writing articles about events for our club newsletter are great ways to volunteer. Participating at one of our out-reach events is another fine and fulfilling opportunity. This is YOUR club. Don't sit back and let other members do the work and have all the fun! Speak with a club officer and find out how you can volunteer and get more involved in the LAAS as a member.

Time To Renew Your Membership?

Please remember to renew your membership once you receive notice from the Club Secretary in your email inbox. Use this link to learn how to renew your membership: <https://fs30.formsite.com/LAAS/MemberRenewal/index.html>

Please send any new contact information to the club secretary at secretary@LAAS.org.



A Guide To The Night Sky

By Tre Gibbs

Here we are, at the end of 2018 and this month brings important changes to our night sky. The most influential event of the month is happening on December 21st at 2:09 pm, and that, my friends, is The Winter Solstice!

Ever since June 21st of this year, our nearest star, the Sun, has been slowly making it's way south - rising and setting a little further south each and every day, simultaneously shortening our days and increasing our nights. This month, on December 21st, the sun will rise and set at the most furthest point south. This marks not only the first day of Winter, but what is usually the shortest day and the longest night of the year. Then, the next day, on the 22nd, the Sun will gradually start to head north again, increasing our amount of daylight and decreasing our evening hours.



Photo: http://2.bp.blogspot.com/_8teTbzhI7X4/TRBFwZW6otI/AAAAAAALLw/

Winter's first Full Moon occurs this month as well! On December 22nd, we will be treated to The Full Cold Moon! Ancient tribes also referred to this month's full moon as "The Long Night's Moon", since December's Full Moon usually corresponds with the longest night of the year. The moon will be officially full at 9:50 am, though it will appear full the night before, during (of course) and the night after.

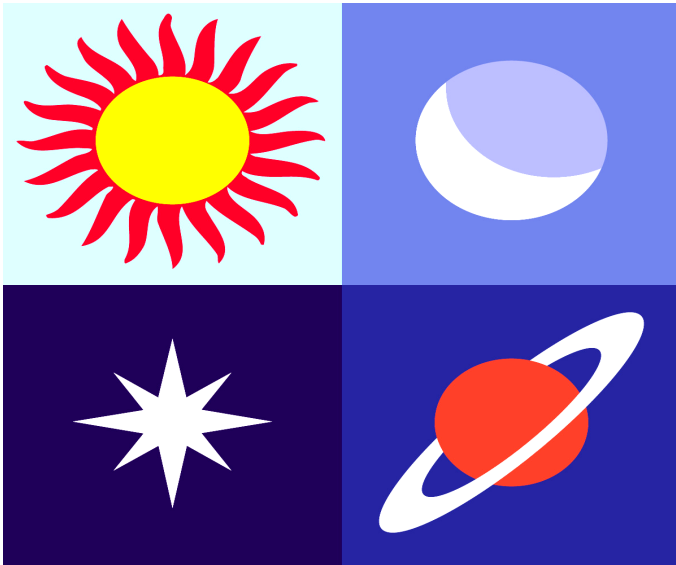
The moon will also share the sky with some of the more prominent and visible planets. For early risers, look to the east on the morning of December 3rd. Low on the horizon (and weather permitting), you will see the brilliant planet Venus just below a thin, waning, crescent moon. On the evening of December 14th, look for the first quarter (or half full) moon traveling the evening sky below the dimming, but still bright, planet Mars.

And speaking of planets.... This year was a great year for viewing Venus, Jupiter, Saturn and Mars. As 2018 comes to an end, the only planet easily visible in our evening skies is Mars, The God of War. Saturn has moved so close to the glare of the setting sun that its difficult to spot. Jupiter is making its way towards the glare of the sun as well, making it impossible to see from Earth. Both of these gas giants will eventually slip to the other side of the sun and will be visible in our early, pre-dawn skies, but we will have to wait a few months for that to happen.

In the meantime, have a safe and wonderful Holiday Season...and remember, KEEP LOOKING UP !

Tre Gibbs

Almanac



December 7 - New Moon. The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 07:20 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

December 13, 14 - Geminids Meteor Shower. The Geminids is the king of the meteor showers. It is considered by many to be the best shower in the heavens, producing up to 120 multicolored meteors per hour at its peak. It is produced by debris left behind by an asteroid known as 3200 Phaethon, which was discovered in 1982. The shower runs annually from December 7-17. It peaks this year on the night of the 13th and morning of the 14th. The first quarter moon will set shortly after midnight leaving dark skies for what should be an excellent early morning show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Gemini, but can appear anywhere in the sky.

December 15 - Mercury at Greatest Western Elongation. The planet Mercury reaches greatest western elongation of 21.3 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the morning sky. Look for the planet low in the eastern sky just before sunrise.

December 21 - December Solstice. The December solstice occurs at 22:23 UTC. The South Pole of the earth will be tilted toward the Sun, which will have reached its southernmost position in the sky and will be directly over the Tropic of Capricorn at 23.44 degrees south latitude. This is the first day of winter (winter solstice) in the Northern Hemisphere and the first day of summer (summer solstice) in the Southern Hemisphere.

December 22 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 17:49 UTC. This full moon was known by early Native American tribes as the Full Cold Moon because this is the time of year when the cold winter air settles in and the nights become long and dark. This moon has also been known as the Full Long Nights Moon and the Moon Before Yule.

December 21, 22 - Ursids Meteor Shower. The Ursids is a minor meteor shower producing about 5-10 meteors per hour. It is produced by dust grains left behind by comet Tuttle, which was first discovered in 1790. The shower runs annually from December 17-25. It peaks this year on the night of the 21st and morning of the 22nd. This year the glare from the full moon will hide all but the brightest meteors. If you are extremely patient, you might still be able to catch a few good ones. Best viewing will be just after midnight from a dark location far away from city lights. Meteors will radiate from the constellation Ursa Minor, but can appear anywhere in the sky.

Source: <http://www.seasky.org/astronomy/astronomy-calendar-2018.html>

Need Help With A New Telescope?

Visit the Garvey Ranch Observatory on any Wednesday night 7 PM to 10 PM for tips and assistance from your fellow LAAS members.

Learn more: [The Garvey Ranch Park Observatory](#)



December 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 60 Inch Night
2 	3	4	5 Garvey Night Board Meeting	6	7	8 Dark Sky Night
9	10 General Meeting/ LAAS Election	11	12 Garvey Night	13 Outreach/ Culver City	14	15 Public Star Party
16	17	18	19 Garvey Night	20	21	22
23	24	25 	26 Garvey-Closed	27	28	29
30	31 					

Additional events with updated information may be posted on the calendar. Please log on to your account on the Night Sky Network (NSN) to view the complete schedule of club events. Link: <https://nightsky.jpl.nasa.gov/>

LAAS Outreach Program

The mission of LAAS is to promote interest in and advance the knowledge of astronomy, optics, telescope making and related subjects. In furtherance of its mission, LAAS conducts public star parties and other outreach events that are intended to enhance the public's understanding of astronomy and its enjoyment and appreciation of the beauty and wonders of our universe.



We provide outreach events at local schools, Griffith Observatory, Mt. Wilson Observatory, various state and county parks, and community events.

Join our Outreach team of volunteers today.

Contact Heven Renteria, our Outreach Coordinator at Outreach@LAAS.org



Want to include astronomy outreach at your school's science night or open house? Follow the link below to access the request form:

https://nightsky.jpl.nasa.gov/club-eventrequest.cfm?Club_ID=1344

LAAS Club Swag

LAAS JACKETS, T-SHIRTS, AND CAPS

Share your club spirit with the public and wear your club colors to help identify you as a member of the LAAS today by ordering a new jacket, t-shirt or cap.

If you would like to purchase club jackets, T-shirts, or caps featuring our club logo, please look for Richard Roosman at the public star party and at our general meeting. Richard will have the club merchandise on sale from 2 PM to 6 PM at the star party.

For further information, feel free to contact Richard at Richardinwalnutpark@msn.com.

You can also use the link on Paypal, if you would like to place an order for club merchandise by using the following link:

<http://laas.org/joomlasite/index.php/laas-merchandise>



Amazon Smiles

The LAAS is now listed on Amazon Smiles. When you purchase any goods on Amazon.com, Amazon will donate a small percentage of the funds they receive from you, back to the LAAS. Here's some information to help bring in funds for our club projects:

What is AmazonSmile?

AmazonSmile is a simple and automatic way for you to support your favorite charitable organization every time you shop, at no cost to you, with the added bonus that Amazon will donate a portion of the purchase price to your favorite charitable organization., such as the LAAS!

Learn more by following this link: <http://smile.amazon.com/>



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John O'Bryan, Jr.

Treasurer

Astronomy Magazine Discounts

Discounts for astronomy magazines can be found on the internet. Look for the best deals possible. Send a copy of your LAAS membership card with your check or payment to receive a club member discount.

Astronomy
magazine

As a member of the Night Sky Network, you may use the above link to renew your Astronomy Magazine subscription (or enter a new subscription) at the club discount rate. If this is a renewal, Astronomy Magazine will match your entered name and address and extend your subscription. For inquiries, please contact Astronomy Magazine customer service & sales at 1-800-533-6644.

[Click here for a NEW Sky & Telescope subscription at the club discount rate.](#)

[Click here for online renewal of your Sky & Telescope magazine subscription](#)



Join the Astronomical Society of the Pacific and help support the cause of advancing science literacy through engagement in astronomy. Member benefits include a **subscription to the online Mercury Magazine**, published quarterly, and **Astronomy Beat**, a monthly on-line column written by "insiders" from the worlds of astronomy research and outreach.

Subscribe or renew to the McDonald Observatory's StarDate Magazine and receive a special discount. Go to this page and press "Add to Cart" under the kind of subscription you want: <http://stardate.org/store/subscribe> Then, on the Checkout form, enter "network" in the Coupon Code box.



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213- 673-7355 Checked daily

Griffith Observatory:

213-473-0800

Sky Report:

213-473-0880

Lockwood Site:

661-245-2106

Not answered, arrange
time with caller.

Outgoing calls – Collect or calling card only.



Click on any of the images below to discover links to astronomy information, videos, photos, and at times, old sci-fi movies, too!



**The Los Angeles
Astronomical Society**
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Los Angeles, CA 90027

Call us for more information and
about our organization and
outreach program.
213-673-7355

Visit our web site at
www.LAAS.org

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To: