Upcoming Events

JANUARY 2019

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- New Year’s Day
- LAS Meeting 6-8 pm
- Martin Luther King Jr’s Birthday
- Total lunar eclipse
- Lunar eclipse January 20th at Rabbit Mountain

LAS Banquet and Meeting January 17 at Beau Jo’s Pizza

The LAS annual banquet meeting is on Thursday, January 17th at Beau Jo’s Pizza, 2033 Ken Pratt Boulevard, Longmont, CO from 6 to 8 pm.

You may sign up for the banquet at https://www.longmontastro.org/membership. There will be an unlimited salad bar and an unlimited pizza bar. The salad bar includes non-alcoholic beverages (soft drinks, ice tea, and coffee). There will be a choice of three pizzas: Lil’ Italy, Sausage Combo, and Pacific Plantation. As each pizza is finished they will bring more. For details see the online Beau Jo’s menu, https://www.beaujos.com/wp-content/uploads/2018/12/Menu_LMT_Main_2019.pdf

For those who prefer gluten-free or vegetarian foods you may order directly from their menu; they have gluten-free and vegetarian options available. You will need to pay Beau Jo’s separately so do not sign up for the banquet online. Please send Marty or Vern a note that you are coming so that we have an idea of how many people will be there. The room capacity is 50 people.

We will have an election for 2019 officers probably between 7:15 to 7:30 pm. The terms for all officers is one year. The officer positions are as follows:

- President - lead meetings and make decisions regarding the club with assistance of other officers and board members
- Vice president - assist president and direct meetings if president absent
- Treasurer - handle club finances, receive payments and deposit funds
- Secretary - keep records of meetings and votes
- Newsletter editor - publish treasurer notes and present club news
- Web master - manage the club’s website
- Board Member (3 positions) - make decisions regarding club policies and finances

Lunar eclipse January 20th at Rabbit Mountain

Scopes and volunteers are needed. Eclipse begins at 7:20 pm; full eclipse is 9:41 to 10:43 pm; ends at 12:48 am.

Lunar Eclipse 2014 by Paul Robinson
The “Orion Nebula” (M42) by Tally O’Donnell is in the back cover position.

The front cover this month is Stephen Garretson’s “Rossette Nebula” (NGC 2244) in constellation Monoceros.

The “Witch’s Head Nebula” (IC 2118) by M. J. Post is in the centerfold position.

The “Orion Nebula” (M42) by Tally O’Donnell is in the back cover position.

The Longmont Astronomical Society is a 501 c(3), non-profit corporation which was established in 1987. The Longmont Astronomical Society’s main goal is to promote local amateur astronomy. This is accomplished through regular monthly meetings, star parties and public observing sessions.

Regular meetings are held every month (except December) on the third Thursday. The current location is at the IHop Restaurant, 2040 Ken Pratt Boulevard in Longmont. Meetings are open to the public and begin at 7:00 PM. A group of us have dinner at the IHop before the meeting around 6 pm.

A broad spectrum of topics are covered at the meetings and include such things as deep sky observing, planetary imaging, narrow band imaging, equipment discussions and demonstrations just to name a few. These subjects are presented by both club members as well as special guests who are professional astronomers or experts in a particular field.

Renew your membership or become a member at https://www.longmontastro.org/membership

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Solar System Highlights

**Mercury**

Mercury is not visible.

**Venus**

Venus is visible in the morning sky in constellation Libra; it moves to Scorpio on the 9th and to Ophiuchus on the 13th, and then to Sagittarius on the 31st. It is around magnitude -4.5 now and decreases to magnitude -4.2 at the end of January. Its disk decreases from 26 arc sec across to 19 arc sec.

**Jupiter**

Jupiter is visible in the morning sky in the constellation Ophiuchus. It will be magnitude -1.8 and its disk will be 32 arc sec across.

**Mars**

Mars is visible in the evening sky in constellation Pisces. It decreases in brightness from magnitude +0.5 to +0.9 this month; its disk decreases in apparent size from 7.4 to 6.2 arc sec across.

**Saturn**

Saturn is not visible this month.

**Uranus**

Uranus is visible in the early evening in constellation Pisces. It is magnitude 5.8 in brightness and its disk is 3.5 arc sec across.

**Neptune**

Neptune is visible in the early evening in constellation Aquarius. It is magnitude 7.9 in brightness and its disk is 2.2 arc sec across.

**Quadrantids Meteor Shower**

Quadrantids meteor shower peak night is on 3rd at 9:57 pm. The name is from Quadrans Muralis a now obsolete constellation which is now part of Bootes. From a dark site you might see about 25 per hour.
Featured Lunar Features: 7 days after new on January 13th at 7:00 pm

Alpine Valley is one of the Moon's top features. It is 120 miles long and 6 miles wide. For a challenge try to see the meandering rille running down its center.

Cassini is a 35 mile wide crater filled with lava.

Appenine Mountain range is a spectacular feature 370 miles long with more than 3000 peaks. The tallest of those is 18,000 ft high from its base to its peak.

Ptolemaeus is a 95 mile wide lava filled crater.
Comet 46P Wirtanen is currently magnitude 4.9 and expected to dim to 7.8 by the end of January. Its coma is 77 arc min across and is expected to increase to 31 arc min. It is now in constellation Lynx and will move to Ursa Major on the 11th. The comet was discovered by American astronomer Carl Wirtanen on January 17, 1948. It has an orbital period of 5.4 years.

Comet 38P Stephen/Oterma is currently magnitude 7.5; it will dim to magnitude 9.2 by Jan 31st. It is in constellation Lynx; its coma decreases from 10.9 arc min to 8.8 arc min at the end of the month.
Comet C/2018 L2 (Atlas) is in constellation Hercules. It is now magnitude 9.0 and will dim to about magnitude 9.3 in brightness by month end. Its coma is about 6.4 arc minutes.

Comet C/2016 R2 (PANSTARRS) is magnitude 10.6 in brightness; it will dim to 10.8 by Feb 1st. It begins the month in constellation Bootes and moves to Hercules on the 24th. Its coma is 7 arc min across.
Navigating the winter night sky: Simply start with what you know or with what you can easily find.

1. Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star.
2. Face south. Overhead twinkles the bright star Capella in Auriga. Jump northwestward along the Milky Way first to Persues, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars Castor and Pollux of Gemini.
3. Directly south of Capella stands the constellation of Orion with its three Belt Stars, its bright red star Betelgeuse, and its bright blue-white star, Rigel.
4. Use Orion’s three Belt stars to point to the red star Aldebaran, then to the Hyades, and the Pleiades star clusters. Travel to the southeast from the Belt stars to the brightest star in the night sky, Sirius.

Binocular Highlights
A: Examine the stars of the Pleiades and Hyades, two naked eye star clusters.
B: Between the "W" of Cassiopeia and Perseus lies the Double Cluster.
C: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.
D: M42 in Orion is a star forming nebula. E: Look south of Sirius for the star cluster M41. F: M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux.

Astronomical League  www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.
Annual banquet will be at Johnny Carinos across the street from the Twin Peaks mall. The speaker will be Dave Gingerich who will talk about the Stardust Mission.

Some accomplishments for the past year:

- Total lunar eclipse events in Longmont and Louisville with over 100 attending each
- Held our first ever imaging clinic and had several presentations on imaging techniques
- Redesigned the website and put it on a new server

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Month long dance between Venus and Jupiter

Throughout January, Venus and Jupiter can be found in the morning twilight low above the southeastern horizon about sixty minutes before sunrise.

1. January 1, 2, and 3 finds the thin crescent moon, full with Earthshine, sliding by brilliant Venus and bright Jupiter. Look 60 minutes before sunrise low in the southeast.

2. During the first three weeks of the new year, Venus and Jupiter slowly approach each other. Finally, on Jan. 22 they are at their closest, forming a very bright duo in the southeastern morning twilight. This will be the brightest planetary conjunction of the year.

3. On the final morning of the January, the thin crescent moon approaches Venus, almost reaching it just as the sun rises on the west coast.

From Our Newsletter Archives

**January 2009**

Annual banquet will be at Johnny Carinos across the street from the Twin Peaks mall. The speaker will be Dave Gingerich who will talk about the Stardust Mission.

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**January 1999**

Officers elected for 1999 were Leigh Pierson for president, Brian Kimball for vice president, Melinda Diehl for secretary/treasurer, Paul Hale for ALCor, Karen Mendenhaul for newsletter editor, and Steve Albers for world wide web. Meetings are held at the Longmont Christian School basement. LAS Banquet will be at the Sante Fe Grill.

**January 1989**

The officers for 1989 were Jim Getson for president, Jim Wilson for vice president, Bud Cohee for secretary, Jenifer Getson for treasurer, Tom Johnston for newsletter editor, and Bob Spohn for ALCor. Talk began about acquiring a club telescope. Fifty-four members and guests attended the second annual LAS banquet. Treasurer reported $77.07 in bank account.
Pac man Nebula (NGC 281) by Marty Butley
NGC 7822 by Stephen Garretson

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The image on the left was taken by the Long-Range Reconnaissance Imager (LORRI) aboard the New Horizons spacecraft. It is the most detailed of Ultima Thule returned so far by the New Horizons spacecraft. It was taken at 5:01 Universal Time on January 1, 2019, just 30 minutes before closest approach from a range of 18,000 miles (28,000 kilometers).

The New Horizons was launched on Jan. 19, 2006; using Jupiter for a gravity boost in February 2007, it conducted a six-month-long reconnaissance flyby study of Pluto and its moons in summer 2015, culminating with Pluto closest approach on July 14, 2015. As part of an extended mission, it head farther into the Kuiper Belt to do a brief flyby of Ultima Thule.
The first ever LAS Calendar. Monthly astrophotos were contributed by LAS members. The calendar is localized to the Denver time zone. It shows LAS meetings and star parties as well as celestial events. Price: $5.00 (pickup at meeting) or $8.00 (mailed) See https://www.longmontastro.org/membership#2

Please join LAS this year! If you are already a member don’t forget to renew. Cost for new members or renewing your membership is $21 for you and your family. See https://www.longmontastro.org/membership

Sign up for LAS annual banquet on January 17th! There is unlimited salad bar and unlimited pizza bar. There will be a choice of three pizzas: Lil’ Italy, Sausage Combo, and Pacific Plantation. Cost per person is $17.

During the meeting we show member images taken during the previous year. It is also when we elect LAS officers for 2019. See https://www.longmontastro.org/membership#4

Thus far LAS has placed 21 telescopes in local libraries. Donate to the LAS telescope program at https://www.longmontastro.org/membership#1