

Antares



The Newsletter of the Kansas Astronomical Observers

Meeting time: January 19, 2019 3:00 pm

Location: **Great Plains Nature Center (GPNC)**

Speaker: **Dr. Adam Pryor, Ph.D.**

Topic: **NASA Project on Impact of Contact with Extra-Terrestrials**

KAO Website: <http://www.kaowichita.com>

The Night Sky Network: <http://www.nightsky.jpl.nasa.gov>

The Astronomical League: <http://www.astroleague.org>

If you have comments or suggestions for an article in the newsletter, e-mail them to:
kevin.l.kight@gmail.com *Please begin the subject line with "Antares"

Current Club Officials

President:	Jerelyn Ramirez	jerelyn.ramirez@gmail.com
Vice-President:	Tony Haidai	thaidai@cox.net
Treasurer:	Paul Ramirez	ramirezpm2@gmail.com
Newsletter/Media:	Kevin Kight	kevin.l.kight@gmail.com

Next Month's Meeting: February 16 @ 3:00pm, Great Plains Nature Center (GPNC)

Club Updates:

Call for Meeting Speakers:

For those members that wish to create and present during a club meeting, or that have a suggestion for a guest speaker during the fall and winter meetings, contact the Club Vice-President: Tony Haidai (thaidai@cox.net)

Newsletter Items for Publication:

Please submit items for publication prior to the 10th of each month to be included in that month's newsletter.

New Club Members:

There are two new members that have recently joined, both from Wichita:

- Cassandra Gearhart
- Andrew Potter

Club Membership Renewals:

January is the club membership drive. To continue membership without interruption to the Antares Newsletter and Reflector Magazine please pay your \$20 dues. Please don't send cash in the mail, make the check out to KAO. Mail to; KAO Treasurer Paul Ramirez, 106 E. Mount Calvary Rd., Saint Marys, KS 66536. Paul will be collecting dues at the January meeting.

KAO Volunteer Awards:

For club members who are wanting to earn the KAO Volunteer Award, please have your participation spreadsheet forms turned in by the January 19 club meeting to qualify for this award. A minimum of 15 volunteered events to earn this award. No NSN toolkits are required but can be used to earn this award. The awards will be given out at our February meeting.

December Club Meeting:

See addendum for a short summary about the December club meeting.

Eyepieces for Sale:

See addendum for a collection of TeleVue Eyepieces club member David Stanislaw is wishing to sell. Just a note that the prices are his asking price, and is open to negotiation.

Club T-shirts available:

Club T-Shirts are always available to all club members year around. (or anyone who wants to support the club) \$10 each, indicate size and quantity to Jerelyn Ramirez or Paul Ramirez by email or at club meetings / outings.

Solar and Planetary Items:

Moon Phases:

Last Quarter: December 29
New Moon: January 5
First Quarter: January 14
Full Moon: January 20

Last Quarter: January 27
New Moon: February 4
First Quarter: February 12
Full Moon: February 19

Planets:

Mercury – Hidden by Solar Glare
Venus – Visible in the morning in Scorpius; rises approximately 4:15 am
Mars – Visible after sunset south in Pisces; setting approximately 11:30 pm
Jupiter – Visible in the morning in Ophiucus; rises approximately 5:05 am
Saturn – Hidden by Solar Glare
Uranus – Visible in Pisces; setting approximately 1:20am
Neptune – Visible in Aquarius; setting approximately 9:45 pm

- A total lunar eclipse occurs on the evening of January 20th with totality occurring at 10:41pm Local time
- Conjunction of Venus and Jupiter on the morning of January 22nd

Comets:

Listed below are comets possibly visible in telescopes from the Wichita area (approximately cutoff at magnitude 15; if available the observed magnitude is used in favor of the JPL prediction). Magnitudes shown are approximate predictions for mid-month. Links are provided for additional information: <http://cometchasing.skyhound.com/>

38P/Stephan-Oterma: An all night comet in Lynx
Magnitude 11.0
<https://theskylive.com/38p-info>

64P/Swift-Gehrels: An all night comet in Aries
Magnitude 10.1
<https://theskylive.com/64p-info>

46P/Wirtanen: A bright all night comet in Lynx
Magnitude: 6.4
<https://theskylive.com/46p-info>

Event Reports:

If you've participated in a club event, please submit an event report to be included here by the 10th of each month. It doesn't have to be anything formal, just a brief description about the event and how it went. Credit will be given unless you request to be kept anonymous.

Upcoming Regional Events:

Symphony in the Flint Hills – June 15

Chase County, Host: TBD

Time: 10:00 AM - 11:00 PM

This year is the 14th Annual Signature Event at the Symphony in the Flint Hills and will be held in Chase County. The theme this year is Ad Astra. The host ranch has not been disclosed and will be updated when location has been released.

This is an all day event. Telescopes are set up for solar viewing while educational outreach presentations are held inside the educational tent before the concert begins. This is a collaboration with the Salina Astronomy Club. At the conclusion of the concert patrons come by for some evening viewing. Jupiter will be in the southeast sky at sunset in Ophiuchus about 8° from the two days from Full Moon to the west. Saturn will be rising on the eastern horizon around 10:30 p.m. about an hour before the end of evening twilight.

Please contact the SFH Team Leader Jerelyn Ramirez for questions, your volunteer assignment, parking passes, and other information regarding this event.

See NSN for details and updates

MSRAL 2019 – June 14-16

Rockhurst University, 1100 Rockhurst Road Kansas City, MO 64110

MSRAL event is being held this year in Kansas City, MO, hosted by The Astronomical Society of Kansas City.

There will be speakers, Vendors, and an Astrophotography Contest.

For more information go to www.msral.org and see attached flyer.

Fall River Star Party – August 2-3

Fall River State Park, Casner Creek Campgrounds

Come join us at the annual Fall River event. Join us for an evening of dark skies and deep space viewing. Jupiter and Saturn will be featured this night too.

Camping is available for all who want to come out for some dark sky viewing. Come for the dark skies and the fellowship. A dinner is planned before the Saturday event for all who attend.

See NSN for details

Upcoming KAO/Public Events:

Blood Wolf Moon - January 20

Lake Afton Public Observatory (LAPO), 5000 West 39th South, Goddard, KS 67052

Time: 7:30 PM

Eclipse begins 9:34pm CST

Totality begins 10:41pm CST

Lake Afton Public Observatory is hosting a Lunar Eclipse Viewing Event. This called a Super Blood Wolf Moon. Super because the Moon will be at Perigee...meaning the Moon will be closer to the Earth in its orbit around the Earth and appear larger. The Moon will pass through the Anti-Sun, or the shadow of the Earth in space. The Moon turns a red color after it enters the Earth's shadow because of the sunlight refracting the light through the Earth's atmosphere. The same reason you see a pink or red sky or clouds during a sunset.

It is known as a Wolf Moon because of American Indian folklore to mark the season. Wolves howl a lot during this time of year. This marks the first full Moon of the year.

See NSN for details

Symphony in the Flint Hills at The Volland Store – March 9

Volland Store, 24098 Volland Rd, Alma, KS 66401

Time: 5:00 PM - 10:00 PM

The Symphony in the Flint Hills will be holding an event at the Volland Store in Alma Kansas. The theme is Sky and Stars. Jana Grcevich, an astrophysicist, will be the speaker. We have been invited to take part in the event by setting up some telescopes and have educational outreach for the guests.

See NSN for details

Astro Fest 2019 – August 10

Lake Afton Public Observatory (LAPO), 5000 West 39th South, Goddard, KS 67052

Time: 1:00 PM – 1:00AM

This is a collaboration with LAPO. Solar activities during the day with other activities through out the day. Having telescopes for the visitors to share with them the wonders of the night sky. This night is three days after a first quarter Moon. Yes it is a lot of Moon, but most visitors have never looked through a telescope and the Moon is always a huge hit. There will be a nice terminator to visually see some depth to some craters. This is also the 50 year Anniversary of the Apollo lunar landing missions. All six landing sites should be visible, you can point them out with your telescope.

This is the second annual event to promote the observatory. To make this astronomy party a success we need volunteers. They plan to stay open till 1:00 a.m.

So lets help out LAPO by kicking off this astronomy party.

See NSN for details

Featured Article:



This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.org to find local clubs, events, and more!

January's Evening Eclipse and Morning Conjunctions

By David Prosper

Observers in the Americas are treated to an evening **total lunar eclipse** this month. Early risers can spot some striking morning conjunctions between **Venus**, **Jupiter**, and the **Moon** late in January.

A **total lunar eclipse** will occur on **January 20th** and be visible from start to finish for observers located in North and South America. This eclipse might be a treat for folks with early bedtimes; western observers can even watch the whole event before midnight. Lunar eclipses takes several hours to complete and are at their most impressive during total eclipse, or totality, when the Moon is completely enveloped by the umbra, the darkest part of Earth's shadow. During totality the color of the Moon can change to a bright orange or red thanks to the sunlight bending through the Earth's atmosphere - the same reason we see pink sunsets. The eclipse begins at 10:34 pm Eastern Standard Time, with totality beginning at 11:41 pm. The total eclipse lasts for slightly over an hour, ending at 12:43 am. The eclipse finishes when the Moon fully emerges from Earth's shadow by 1:51 am. Convert these times to your own time zone to plan your own eclipse watching; for example, observers under Pacific Standard Time will see the eclipse start at 7:34 pm and end by 10:51 pm.

Lunar eclipses offer observers a unique opportunity to judge how much the Moon's glare can interfere with stargazing. On eclipse night the Moon will be in **Cancer**, a constellation made up of dim stars. How many stars you can see near the full Moon before or after the eclipse? How many stars can you see during the total eclipse? The difference may surprise you. During these observations, you may spot a fuzzy cloud of stars relatively close to the Moon; this is known as the "**Beehive Cluster**," **M44**, or **Praesepe**. It's an open cluster of stars thought to be about 600 million year old and a little under 600 light years distant. Praesepe looks fantastic through binoculars.

Mars is visible in the evening and sets before midnight. It is still bright but has faded considerably since its closest approach to Earth last summer. Watch the red planet travel through the constellation Pisces throughout January.

Venus makes notable early morning appearances beside both **Jupiter** and the **Moon** later this month; make sure to get up about an hour before sunrise for the best views of these events. First, Venus and Jupiter approach each other during the third full week of January. Watch their conjunction on the 22nd, when the planets appear to pass just under $2\frac{1}{2}$ degrees of each other. The next week, observe Venus in a close conjunction with a crescent Moon the morning of the 31st. For many observers their closest pass - just over half a degree apart, or less than a thumb's width held at arm's length - will occur after sunrise. Since Venus and the Moon are so bright you may still be able to spot them, even after sunrise. Have you ever seen Venus in the daytime?

If you have missed **Saturn** this winter, watch for the ringed planet's return by the end of the month, when it rises right before sunrise in Sagittarius. See if you can spot it after observing Venus' conjunctions!

You can catch up on all of NASA's current and future missions at nasa.gov



Caption:

*Have you ever wondered how eclipses occur? You can model the Earth-Moon system using just a couple of small balls and a measuring stick to find out! The “**yardstick eclipse**” model shown here is set up to demonstrate a lunar eclipse. The “Earth” ball (front, right) casts its shadow on the smaller “Moon” ball (rear, left). You can also simulate a solar eclipse just by flipping this model around. You can even use the Sun as your light source! Find more details on this simple eclipse model at bit.ly/yardstickeclipse*