



# The New Syzygy

The Newsletter of the Kern Astronomical Society

number 604

2026

Our regular monthly meeting will be held at  
**Round Table Pizza**  
4200 Gosford Rd, Bakersfield, CA 93313

## January 9

Social Hour @ 6:00p  
Meeting @ 7:00p



[facebook.com/groups/syzygy](https://facebook.com/groups/syzygy)



[kernastro.org](http://kernastro.org)



[kernastronomicalsociety@gmail.com](mailto:kernastronomicalsociety@gmail.com)



## UPCOMING EVENTS

### Star Party

January 17th at the Frazier Mountain Trailhead, weather permitting.

[Click for map](#)

## PUBLIC OUTREACH

Cesar Chavez Elementary – 2/18, 5-6:30p

Dark Skies Festival – Sept 11-13

## IN THE SKY

Jupiter at opposition – January 10th. This will be the best time to view our largest planet!

## VOLUNTEERS NEEDED

If you're interested in helping assist in any of our public outreach meetings, please email us and let us know!

[kernastronomicalsociety@gmail.com](mailto:kernastronomicalsociety@gmail.com)

## New Year Planning

At this month's club meeting, we won't have a speaker. Instead, we'll be discussing some options for club activities in 2026.

**Bring your ideas!**

# 2025-26 KERN COUNTY ASTRONOMICAL SOCIETY SCHEDULE

**REMINDER** – Below is a list of our upcoming meetings for the 25-2026 club year. Monthly club meetings will be held at the Round Table Pizza at 4200 Gosford Rd. from 6pm to roughly 9pm. Monthly board member meetings are held the last Thursday of every month at 5060 California Ave #600 from 6pm to 7pm. We would like to remind everyone that club members are welcome to join our board meetings!

## BOARD MEETINGS

October 30  
November 20 \*  
December 18 \*  
January 29  
February 26  
March 26  
April 30  
May 28  
June – no meeting  
July 30  
August 27  
September 24

\* Moved one week early due to holidays

## CLUB MEETINGS

November 7  
December 5  
January 9  
February 6  
March 6  
April 3  
May 1  
June 5  
July – no meeting  
August 7  
September 4



# HOW BIG? HOW FAR?

BC Planetarium Show

Presented by Dr. Nick Strobel

KCAS members have the wonderful opportunity to enjoy an exclusive show at the Bakersfield College William M. Thomas Planetarium titled ***How Big? How Far?***

Tickets will be on sale at the December, January, and February KCAS club meetings.

Only 72 seats are available and this show sells out, so act quickly!

Thursday, February 26, 2026

Bakersfield College

\$10 per ticket

\$5 parking

Doors close at 7pm.

The Kern County Astronomical Society would like to thank Dr. Strobel for all his work in bringing us these amazing shows!



**BAKERSFIELD  
COLLEGE**



# UPCOMING SPEAKERS

Jan 9 No Guest Speaker

Feb 6 Robert Crewdson – Club Member  
Meteorites

Mar 6 Tim Elam – Local Geologist  
San Andreas / Earthquake Faults

Apr 3 Angela Dorsey – JPL  
TBA

May 1 Sam Rose – Caltech  
TBA

Jun 5 Sarah Elizabeth McCandless – JPL  
NEO Surveyor

Aug 7 Daniel Huecker – Sequoia Parks  
Conservancy – Dark Sky Festival

Sep 4 Rod Guice – Club Member  
Milankovitch Cycle



# The Evening Sky Map

**FREE\* EACH MONTH FOR YOU TO EXPLORE, LEARN & ENJOY THE NIGHT SKY**



Follow on Bluesky  
[skymaps.com/bsky](https://skymaps.com/bsky)

## Sky Calendar – January 2026

1 **Moon at perigee** (closest to Earth) at 21:39 UT (distance 360,348km; angular size 33.2').

3 **Full Moon** at 10:03 UT.

3 **Earth at Perihelion** (closest to Sun) at 17h UT. The distance is 0.983302 a.u. (147.1 million kilometers).

3 **Quadrantid Meteor Shower** peaks at 21h UT. Active between December 28 and January 12. Expect up to meteors per hour under dark skies. Radiant is in northern Boötes. Northern hemisphere only. Moonlight interferes.

4 **Moon near Jupiter** at 0h UT (morning sky). Mag. -2.7.

6 **Venus at superior conjunction** with the Sun at 16h UT (not visible). The brightest planet passes into the evening sky.

6 **Moon near Regulus** at 18h UT (morning sky).

9 **Mars at conjunction** with the Sun at 12h UT. Mars passes into the morning sky.

10 **Jupiter at opposition** at 9h UT. This is the best time to view the largest planet in the Solar System. Mag. -2.7.

10 **Last Quarter Moon** at 15:48 UT.

11 **Moon near Spica** at 0h UT (morning sky).

13 **Moon at apogee** (farthest from Earth) at 21h UT (distance 405,438km; angular size 29.5').

14 **Moon near Antares** at 21h UT (morning sky).

18 **New Moon** at 19:52 UT. Start of lunation 1275.

21 **Mercury at superior conjunction** with the Sun at 16h (not visible). The innermost planet passes into the evening sky.

23 **Moon near Saturn** at 10h UT (evening sky). Mag. 1.2.

26 **First Quarter Moon** at 4:47 UT.

27 **Moon near the Pleiades** at 22h UT (evening sky).

29 **Moon at perigee** (closest to Earth) at 21:46 UT (distance 365,871km; angular size 32.7').

31 **Moon near Jupiter** at 4h UT (evening sky). Mag. -2.6.

More sky events and links at <http://Skymaps.com/skycalendar>

All times in Universal Time (UT). (USA Eastern Standard Time = UT - 5 hours.)

 ★ **Support The Evening Sky Map** ★  
• *Helping curious minds to explore the night sky since January 2000* •  
**Recommended Products for Sky Watchers:** [skymaps.com/store/](http://skymaps.com/store/)  
All sales support the production of this free resource. Thank you.



★ Support The Evening Sky Map ★

- *Helping curious minds to explore the night sky since January 2000* •

**Recommended Products for Sky Watchers:** [skymaps.com/store/](http://skymaps.com/store/)

All sales support the production of this free resource. Thank you.

K<sub>T</sub>

## INSTRUCTIONS: THE SKY MAP

## Star Magnitudes

-1 0 1 2 3 4

**\* TERMS OF USE:** FREE FOR NON-COMMERCIAL EDUCATIONAL USE. ASTRONOMY EDUCATION GROUPS MAY FREELY DISTRIBUTE PRINTED HANDOUTS. FULL DETAILS AT <http://Skymaps.com/terms.html>

## Globular Star Cluster $\oplus$

• • • • •

itudes -1 0 1 2 3 4

allassoudi © All Rights Reserved

© 2010, NEDO. All Rights Reserved.

DETAILS AT <http://Skymaps.com/terms.html>

## About the Celestial Objects

Listed on this page are several of the brighter, more interesting celestial objects visible in the evening sky this month (refer to the monthly sky map). The objects are grouped into three categories. Those that can be easily seen with the naked eye (that is, without optical aid), those easily seen with binoculars, and those requiring a telescope to be appreciated. **Note, all of the objects (except single stars) will appear more impressive when viewed through a telescope or very large binoculars.** They are grouped in this way to highlight objects that can be seen using the optical equipment that may be available to the star gazer.

## Tips for Observing the Night Sky

When observing the night sky, and in particular deep-sky objects such as star clusters, nebulae, and galaxies, it's always best to observe from a dark location. Avoid direct light from street lights and other sources. If possible observe from a dark location away from the light pollution that surrounds many of today's large cities.

You will see more stars after your eyes adapt to the darkness—usually about 10 to 20 minutes after you go outside. Also, if you need to use a torch to view the sky map, cover the light bulb with red cellophane. This will preserve your dark vision.

Finally, even though the Moon is one of the most stunning objects to view through a telescope, its light is so bright that it brightens the sky and makes many of the fainter objects very difficult to see. So try to observe the evening sky on moonless nights around either New Moon or Last Quarter.

## Astronomical Glossary

**Conjunction** – An alignment of two celestial bodies such that they present the least angular separation as viewed from Earth.

**Constellation** – A defined area of the sky containing a star pattern.

**Diffuse Nebula** – A cloud of gas illuminated by nearby stars.

**Double Star** – Two stars that appear close to each other in the sky; either linked by gravity so that they orbit each other (binary star) or lying at different distances from Earth (optical double). Apparent separation of stars is given in seconds of arc (").

**Ecliptic** – The path of the Sun's center on the celestial sphere as seen from Earth.

**Elongation** – The angular separation of two celestial bodies. For Mercury and Venus the greatest elongation occurs when they are at their most angular distance from the Sun as viewed from Earth.

**Galaxy** – A mass of up to several billion stars held together by gravity.

**Globular Star Cluster** – A ball-shaped group of several thousand old stars.

**Light Year (ly)** – The distance a beam of light travels at 300,000 km/sec in one year.

**Magnitude** – The brightness of a celestial object as it appears in the sky.

**Open Star Cluster** – A group of tens or hundreds of relatively young stars.

**Opposition** – When a celestial body is opposite the Sun in the sky.

**Planetary Nebula** – The remnants of a shell of gas blown off by a star.

**Universal Time (UT)** – A time system used by astronomers. Also known as Greenwich Mean Time. USA Eastern Standard Time (for example, New York) is 5 hours behind UT.

**Variable Star** – A star that changes brightness over a period of time.

## NORTHERN HEMISPHERE JANUARY 2026

# CELESTIAL OBJECTS



## Easily Seen with the Naked Eye

Capella	• The 6th brightest star. Appears yellowish in color. Spectroscopic binary. Dist=42 ly.
Sirius	• The brightest star in the sky. Also known as the "Dog Star". Dist=8.6 ly.
CMi	• Greek name meaning "before the dog" - rises before Sirius (northern latitudes). Dist=11.4 ly.
δ Cephei	• Cepheid prototype. Mag varies between 3.5 & 4.4 over 5.366 days. Mag 6 companion.
Deneb	• Brightest star in Cygnus. One of the greatest known supergiants. Dist=1,400 ±200 ly.
Castor	• Multiple star system with 6 components. 3 stars visible in telescope. Dist=52 ly.
Pollux	• With Castor, the twin sons of Leda in classical mythology. Dist=34 ly.
Vega	• The 5th brightest star in the sky. A blue-white star. Dist=25.0 ly.
Rigel	• The brightest star in Orion. Blue supergiant star with mag 7 companion. Dist=770 ly.
Betelgeuse	• One of the largest red supergiant stars known. Diameter=300 times that of Sun. Dist=430 ly.
Algol	• Famous eclipsing binary star. Magnitude varies between 2.1 & 3.4 over 2.867 days.
Pleiades	• The Seven Sisters. Spectacular cluster. Many more stars visible in binoculars. Dist=399 ly.
Hyades	• Large V-shaped star cluster. Binoculars reveal many more stars. Dist=152 ly.
Aldebaran	• Brightest star in Taurus. It is not associated with the Hyades star cluster. Dist=66.7 ly.
Polaris	• The North Pole Star. A telescope reveals an unrelated mag 8 companion star. Dist=433 ly.

## Easily Seen with Binoculars

M31	• The Andromeda Galaxy. Most distant object visible to naked eye. Dist=2.5 million ly.
M2	• Resembles a fuzzy star in binoculars.
M38	• Stars appear arranged in "pi" or cross shape. Dist=4,300 ly.
M36	• About half size of M38. Located in rich Milky Way star field. Dist=4,100 ly.
M37	• Very fine star cluster. Discovered by Messier in 1764. Dist=4,400 ly.
M44	• Praesepe or Beehive Cluster. Visible to the naked eye. Dist=590 ±20 ly.
M41	• First recorded observation by Aristotle in 325 BC as "cloudy spot". Dist=2,300 ly.
μ Cephei	• Herschel's Garnet Star. One of the reddest stars. Mag 3.4 to 5.1 over 730 days.
Mira	• Famous long period variable star. Mag varies between 3.0 & 10.1 over 332 days.
χ Cygni	• Long period pulsating red giant. Magnitude varies between 3.3 & 14.2 over 407 days.
M39	• May be visible to the naked eye under good conditions. Dist=900 ly.
ν Draconis	• Wide pair of white stars. One of the finest binocular pairs in the sky. Dist=100 ly.
M35	• Fine open cluster located near foot of the twin Castor. Dist=2,800 ly.
γ Leporis	• Visible with binoculars. Gold & white stars. Mags 3.6 & 6.2. Dist=30 ly. Sep=96.3".
R Lyrae	• Semi-regular variable. Magnitude varies between 3.9 & 5.0 over 46.0 days.
2232	• Large scattered star cluster of 20 stars. Dist=1,300 ly.
2244	• Surrounded by the rather faint Rosette Nebula. Dist=5,540 ly.
M50	• Visible with binoculars. Telescope reveals individual stars. Dist=3,000 ly.
Cr 69	• Lambda Orionis Cluster. Dist=1,630 ly.
Ori	• The Great Orion Nebula. Spectacular bright nebula. Best in telescope. Dist=1,300 light years.
M42	• Only globular known to contain a planetary nebula (Mag 14, d=1"). Dist=30,000 ly.
M15	• Double Cluster in Perseus. NGC 869 & 884. Excellent in binoculars. Dist=7,300 ly.
Double Cluster	• Double Cluster in Perseus. NGC 869 & 884. Excellent in binoculars. Dist=7,300 ly.
253	• Fine, large, cigar-shaped galaxy. Requires dark sky. Member of Sculptor Group.
Scl	• Good eyesight or binoculars reveals 2 stars. Not a binary. Mizar has a mag 4 companion.
Mizar & Alcor	• Mizar & Alcor

## Telescopic Objects

γ Andromedae	• Attractive double star. Bright orange star with mag 5 blue companion. Sep=9.8".
γ Arietis	• Impressive looking double blue-white star. Visible in a small telescope. Sep=7.8".
M67	• Contains 500+ stars mag 10 & fainter. One of the oldest clusters. Dist=2,350 ly.
η Cassiopeiae	• Yellow star mag 3.4 & orange star mag 7.5. Dist=19 ly. Orbit=480 years. Sep=12".
61 Cygni	• Attractive double star. Mags 5.2 & 6.1 orange dwarfs. Dist=11.4 ly. Sep=28.4".
γ Delphini	• Appear yellow & white. Mags 4.3 & 5.2. Dist=100 ly. Struve 2725 double in same field.
θ Eridani	• Striking blue-white double star. Mags 3.2 & 4.3. Visible in a small telescope. Sep=8.2".
β Monocerotis	• Triple star. Mags 4.6, 5.0 & 5.4. Requires telescope to view arc-shape. Sep=7.3".
2264	• Christmas Tree Cluster. Associated with the Cone Nebula. Dist=2,450 ly.
ο Orionis	• Superb multiple star. 2 mag 7 stars one side, mag 9 star on other. Struve 761 triple in field.
M1	• Crab Nebula. Remnant from supernova which was visible in 1054. Dist=6,500 ly.
M33	• Fine face-on spiral galaxy. Requires a large aperture telescope. Dist=2.3 million ly.
M81	• Beautiful spiral galaxy visible with binoculars. Easy to see in a telescope.
M82	• Close to M81 but much fainter and smaller.