



The New Syzygy

The Newsletter of the Kern Astronomical Society

number 612

2026

Our regular monthly meeting will be held at

Round Table Pizza

4200 Gosford Rd, Bakersfield, CA 93313

October 2

Social Hour @ 6:00p

Meeting @ 7:00p



facebook.com/groups/syzygy



kernastro.org



kernastronomicalsociety@gmail.com

SPECIAL ANNOUNCEMENT PAGE 2

Please check out the announcement from our club board.

CLUB ELECTIONS

Club elections are happening at this month's club meeting
See you there!

Upcoming Events

Upcoming Events have moved to page 2. Check it out!



CLUB ANNOUNCEMENT

A message from the board of directors

It was recently brought to our attention that some members may not have received information about registration for this year's Dark Sky Festival. We'd like to apologize to any members who may have missed the opportunity to participate.

Every member of our club is important to us, including those who may not be able to attend our monthly meetings regularly, and we want to make sure important club and event information reaches as much of our membership as possible.

As we move forward, we are making a broader effort to improve the way we communicate with members. This includes development of our new website, improvements to the club calendar, and a renewed effort to include more complete information about upcoming events, registration deadlines, and other club activities in the newsletter.

As our club continues to grow and evolve, we appreciate opportunities to identify areas where we can improve, and we always welcome feedback from our members. If you notice that important information is missing, unclear, or difficult to find, please feel free to reach out to a member of the club leadership so we can address it. Open communication helps us make the club better for everyone, and we look forward to continuing to improve the way we keep our members informed and connected.

**Thank you,
Your 2025-2026 Board Members**



UPCOMING EVENTS

Club Star Parties

When: Oct 10, Nov 7, Dec 5 (or 12, TBD)

Where: Frazier Mountain Trailhead ([map](#))

October Outreach Events

Movies in the Park

When: Oct 23

Where: Silver Creek Park ([map](#))

Club Setup Time: 5:00pm

Event Time: Dusk/6:00pm

Harding Elementary Family STEAM Night

When: Oct 28

Where: Harding Elementary School ([map](#))

Club Setup Time: 1:30pm – 4:00pm

Event Time: 4:30pm – 6:30pm

2027 Dark Sky Festival

Volunteer Registration

January 8 – June 4, 2027

Event Details TBA

Club Speakers

October 2

Speaker: Tim Elam

Subject: Roadside Geology of Kern County

November 8

Speaker: Tom Mason

Subject: Mt. Wilson Observatory

IN THE SKY

THINGS TO LOOK FOR IN OCTOBER

-  Oct 4 – Saturn is at opposition, its closest and brightest in 2026. Saturn rises at sunset and will continue to shine beautifully through the night until dawn.
-  Oct 6 – Moon near Jupiter. Look to the eastern horizon in the pre-dawn hours for a great photo-op of these two!
-  Oct 12 – Mercury at easternmost elongation, near the Moon. Just after sunset, catch Mercury at its furthest angle from the sun and right next to a tiny sliver of a new moon.
-  Oct 21 – Peak of the Orionid meteor shower. Produced by debris from Halley's Comet, this annual shower can send bright, fast meteors streaking across the pre-dawn sky.

**Look for more events at
the back of this newsletter!**



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 Thursday of the week before the monthly club meeting 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

November 20 *

December 18 *

January 29

February 26

March 26

April 23

May 28

June - no meeting

July 30

August 27

September 24

October 24

* Moved one week early due to holidays

CLUB MEETINGS

December 5

January 9

February 6

March 6

April 3

May 1

June 5

July - no meeting

August 7

September 4

October 2

November 6



KAS
KERNASTRO.ORG

KAS Information

Since 1956, the Kern County Astronomical Society has promoted community awareness of current events in astronomy and provides a forum for sharing of knowledge and experiences among amateur astronomers. Annual membership is \$35.00 which also provides membership in the Amateur Astronomical League, access to their newsletter (Reflector Magazine), and participation in observational programs.

Star Parties & Outreach

The Kern County Astronomical Society typically has two Club Star Parties each month depending on the weather. Our Club Parties are held on Saturdays nearest the New Moon. We also host Public Star Parties at various locations around town during April - October. These parties are held on Saturdays nearest the first quarter Moon. In addition, we also host Lunar, Solar, and Planetary viewing for public schools. Requests may be directed to our Star Party Coordinator.

Club Equipment

The Kern County Astronomical Society has telescopes and accessories (listed below) available for loan to Club Members in good standing. Members are encouraged to borrow the different types of telescopes in stock (especially if you are considering purchasing one). Trying out different sizes and types of telescopes can help you make an informed decision about purchases. If you have a Club telescope in your possession, you will be expected to participate in at least one public star party.

- **6" f/6, 8" f/6, 10" f/5.6, 13" f/4.5 Dobsonian Telescopes**
- **Parks Jovian 90**
- **3½" f/13 Maksukov-Cassegrain**
- **4" f/15 Unitron Refractor**
- **8" Solar Filter**
- **Assorted Eyepieces**

The Evening Sky Map

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

Sky Calendar – October 2026



Follow us on Bluesky
skymaps.com/bsky/

- 1 **Moon at perigee** (closest to Earth) at 20:47 UT (distance 369,334km; angular size 32.4').
- 3 **Last Quarter Moon** at 13:25 UT.
- 4 **Saturn at opposition** (opposite the Sun) at 12h UT. The ringed planet is at its closest and brightest in 2026. Mag. 0.3.
- 5 **Moon, Mars and Beehive Cluster (M44)** within 3.4° circle at 12h UT (66° from Sun, morning sky). Mag. 1.1.
- 6 **Moon near Jupiter** at 11h UT (morning sky). Mag. -1.9.
- 6 **Venus at southernmost declination** (-21.3°) at 18h UT (evening sky). Mag. -4.5.
- 7 **Moon near Regulus** at 4h UT (morning sky).
- 7 **Mercury 5.0° NNE of Venus** at 5h UT (25° from Sun, evening sky). Mags. 0.0 and -4.4.
- 10 **New Moon** at 15:49 UT. Start of lunation 1284.
- 11 **Mars 0.10° S of Beehive Cluster (M44)** at 13h UT (morning sky). Mag. 1.1.
- 12 **Moon near Venus** at 5h UT (evening sky). Mag. -4.3.
- 12 **Mercury at easternmost elongation** at 10h UT (25.2° from Sun, evening sky). Mag. 0.0.
- 12 **Asteroid 4 Vesta** at opposition at 17h UT. Mag. 6.5.
- 14 **Moon near Antares** at 22h UT (evening sky).
- 16 **Moon at apogee** (farthest from Earth) at 23h UT (distance 404,643km; angular size 29.5').
- 18 **First Quarter Moon** at 16:12 UT.
- 21 **Orionid meteor shower peaks.** Arises from the debris field of Comet Halley. Active from October 2 to November 7. Produces very fast (67 km/sec), generally faint meteors (10–20 per hour). Radiant located near Orion's club asterism.
- 24 **Venus at inferior conjunction** with the Sun at 4h UT. The brightest planet passes into the morning sky.
- 24 **Moon near Saturn** at 13h UT (evening sky). Mag. 0.4.
- 26 **Full Moon** at 4:12 UT.
- 28 **Moon near the Pleiades** at 2h UT (morning sky).
- 28 **Moon at perigee** (closest to Earth) at 18:11 UT (distance 364,407km; angular size 32.8').

More sky events and links at <http://Skymaps.com/sc2610/>

All times in Universal Time (UT). (USA Eastern Daylight Time = UT - 4 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/
All sales support the production of this free resource. Thank you.

NORTHERN HEMISPHERE OCTOBER 2026

SKY MAP SHOWS HOW
THE NIGHT SKY LOOKS

EARLY OCT 8 PM

LATE OCT 7 PM

(Add 1 Hour For Daylight Saving)

SKY MAP DRAWN FOR

A LATITUDE OF 40°

NORTH AND IS

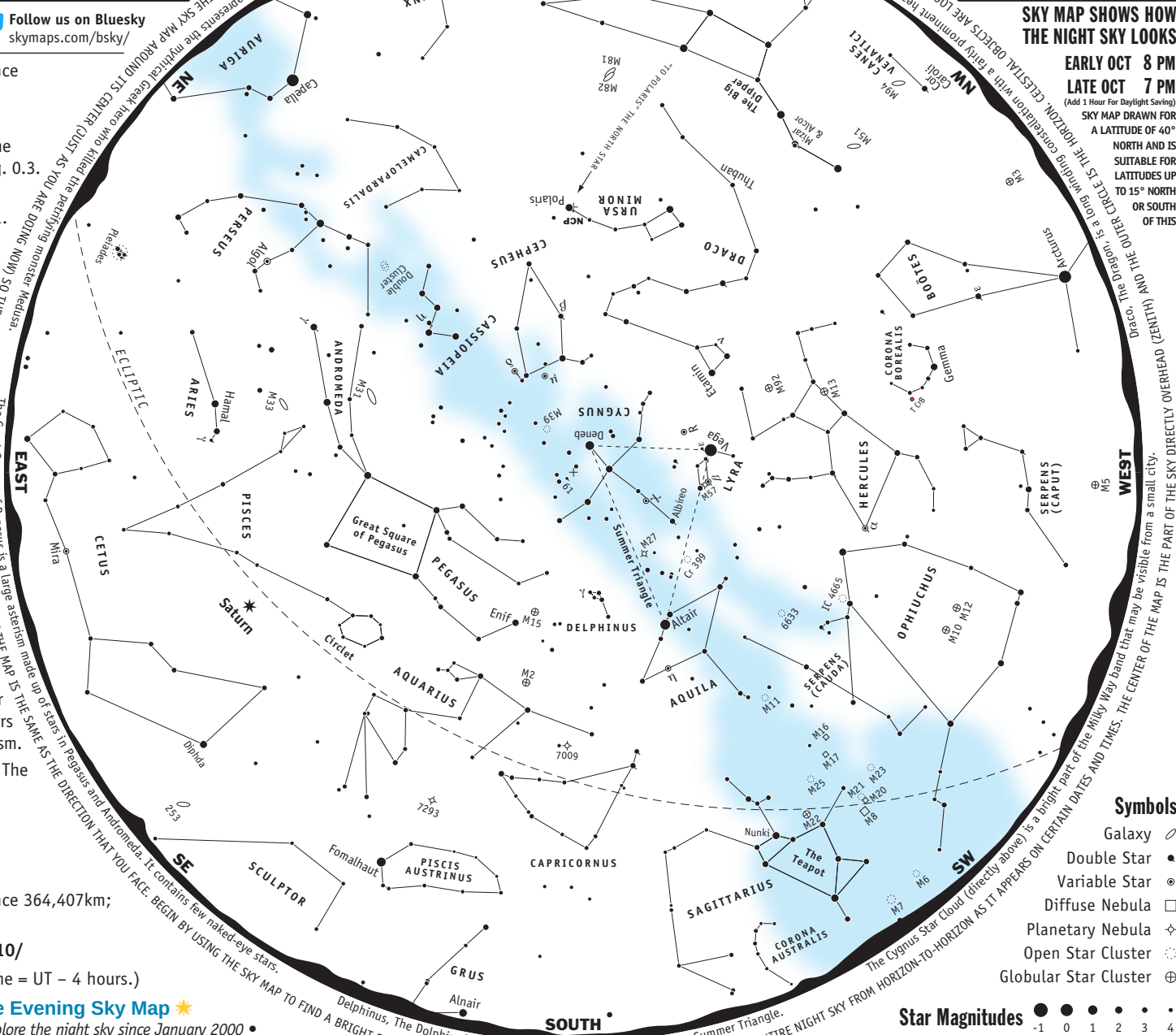
SUITABLE FOR

LATITUDES UP

TO 15° NORTH

OR SOUTH

OF THIS



Symbols

Galaxy

Double Star

Variable Star

Diffuse Nebula

Planetary Nebula

Open Star Cluster

Globular Star Cluster

Star Magnitudes
-1 0 1 2 3 4

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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
OCTOBER 2026

CELESTIAL OBJECTS



Easily Seen with the Naked Eye

Altair	Aql	• Brightest star in Aquila. Name means "the flying eagle". Dist=16.7 ly.
Capella	Aur	• The 6th brightest star. Appears yellowish in color. Spectroscopic binary. Dist=42 ly.
Arcturus	Boo	• Orange, giant K star. Name means "bear watcher". Dist=36.7 ly.
δ Cephei	Cep	• Cepheid prototype. Mag varies between 3.5 & 4.4 over 5.366 days. Mag 6 companion.
Deneb	Cyg	• Brightest star in Cygnus. One of the greatest known supergiants. Dist=1,400±200 ly.
α Herculis	Her	• Semi-regular variable. Magnitude varies between 3.1 & 3.9 over 90 days. Mag 5.4 companion.
Vega	Lyr	• The 5th brightest star in the sky. A blue-white star. Dist=25.0 ly.
Algol	Per	• Famous eclipsing binary star. Magnitude varies between 2.1 & 3.4 over 2.867 days.
Fomalhaut	PsA	• Brightest star in Piscis Austrinus. In Arabic the "fish's mouth". Dist=25 ly.
Pleiades	Tau	• The Seven Sisters. Spectacular cluster. Many more stars visible in binoculars. Dist=380 ly.
Polaris	UMi	• The North Pole Star. A telescope reveals an unrelated mag 8 companion star. Dist=433 ly.

Easily Seen with Binoculars

M31	And	• The Andromeda Galaxy. Most distant object visible to naked eye. Dist=2.93 million ly.
M2	Aqr	• Resembles a fuzzy star in binoculars.
η Aquilae	Aql	• Bright Cepheid variable. Mag varies between 3.6 & 4.5 over 7.166 days. Dist=1,200 ly.
μ Cephei	Cep	• Herschel's Garnet Star. One of the reddest stars. Mag 3.4 to 5.1 over 730 days.
χ Cygni	Cyg	• Long period pulsating red giant. Magnitude varies between 3.3 & 14.2 over 407 days.
M39	Cyg	• May be visible to the naked eye under good conditions. Dist=900 ly.
ν Draconis	Dra	• Wide pair of white stars. One of the finest binocular pairs in the sky. Dist=100 ly.
M13	Her	• Best globular in northern skies. Discovered by Halley in 1714. Dist=23,000 ly.
M92	Her	• Fainter and smaller than M13. Use a telescope to resolve its stars.
ε Lyrae	Lyr	• Famous Double Double. Binoculars show a double star. High power reveals each a double.
R Lyrae	Lyr	• Semi-regular variable. Magnitude varies between 3.9 & 5.0 over 46.0 days.
M12	Oph	• Close to the brighter M10. Dist=18,000 ly.
M10	Oph	• 3 degrees from the fainter M12. Both may be glimpsed in binoculars. Dist=14,000 ly.
IC 4665	Oph	• Large, scattered open cluster. Visible with binoculars.
6633	Oph	• Scattered open cluster. Visible with binoculars.
M15	Peg	• Only globular known to contain a planetary nebula (Mag 14, d=1"). Dist=30,000 ly.
Double Cluster	Per	• Double Cluster in Perseus. NGC 869 & 884. Excellent in binoculars. Dist=7,300 ly.
M8	Sgr	• Lagoon Nebula. Bright nebula bisected by a dark lane. Dist=5,200 ly.
M25	Sgr	• Bright cluster located about 6 deg N of "teapot's" lid. Dist=1,900 ly.
M22	Sgr	• A spectacular globular star cluster. Telescope will show stars. Dist=10,000 ly.
Mizar & Alcor	UMa	• Good eyesight or binoculars reveals 2 stars. Not a binary. Mizar has a mag 4 companion.
Cr 399	Vul	• Coathanger asterism or "Brocchi's Cluster". Not a true star cluster. Dist=218 to 1,140 ly.

Telescopic Objects

γ Andromedae	And	• Attractive double star. Bright orange star with mag 5 blue companion. Sep=9.8".
7009	Aqr	• Saturn Nebula. Requires 8-inch telescope to see Saturn-like appendages.
7293	Aqr	• Helix Nebula. Spans nearly 1/4 deg. Requires dark sky. Dist=300 ly.
γ Arietis	Ari	• Impressive looking double blue-white star. Visible in a small telescope. Sep=7.8".
M51	CVn	• Whirlpool Galaxy. First recognised to have spiral structure. Dist=25 million ly.
η Cassiopeiae	Cas	• Yellow star mag 3.4 & orange star mag 7.5. Dist=19 ly. Orbit=480 years. Sep=12".
Albireo	Cyg	• Beautiful double star. Contrasting colours of orange and blue-green. Sep=34.4".
61 Cygni	Cyg	• Attractive double star. Mags 5.2 & 6.1 orange dwarfs. Dist=11.4 ly. Sep=28.4".
γ Delphini	Del	• Appear yellow & white. Mags 4.3 & 5.2. Dist=100 ly. Struve 2725 double in same field.
β Lyrae	Lyr	• Eclipsing binary. Mag varies between 3.3 & 4.3 over 12.940 days. Fainter mag 7.2 blue star.
M57	Lyr	• Ring Nebula. Magnificent object. Smoke-ring shape. Dist=4,100 ly.
M23	Sgr	• Elongated star cluster. Telescope required to show stars. Dist=2,100 ly.
M20	Sgr	• Trifid Nebula. A telescope shows 3 dust lanes trisecting nebula. Dist=5,200 ly.
M21	Sgr	• A fine and impressive cluster. Dist=4,200 ly.
M17	Sgr	• Omega Nebula. Contains the star cluster NGC 6618. Dist=4,900 ly.
M11	Sct	• Wild Duck Cluster. Resembles a globular through binoculars. V-shaped. Dist=5,600 ly.
M16	Ser	• Eagle Nebula. Requires a telescope of large aperture. Dist=8,150 ly.
M33	Tri	• Fine face-on spiral galaxy. Requires a large aperture telescope. Dist=2.3 million ly.
M81	UMa	• Beautiful spiral galaxy visible with binoculars. Easy to see in a telescope.
M27	Vul	• Dumbbell Nebula. Large, twin-lobed shape. Most spectacular planetary. Dist=975 ly.