

Astronomy Targets for the End of June

Some object in the sky around 8pm around the end of June (or a month either side). The darker, and less light pollution affected the night sky, the easier it will be to locate and observe these objects. Many objects are only readily visible from locations well away from city light pollution and on Moonless, or nearly Moonless, nights.

Also consult the targets list compiled for the end of March. Many of those targets are still observable towards the middle of the year.

Success in finding these objects requires the finder scope and main telescope optics to be co-aligned and both pointing to the same point. Follow the telescope set-up instruction provided with your telescope. For all targets, it is highly recommended that you start your search using a low-power eyepiece, probably around 25mm.

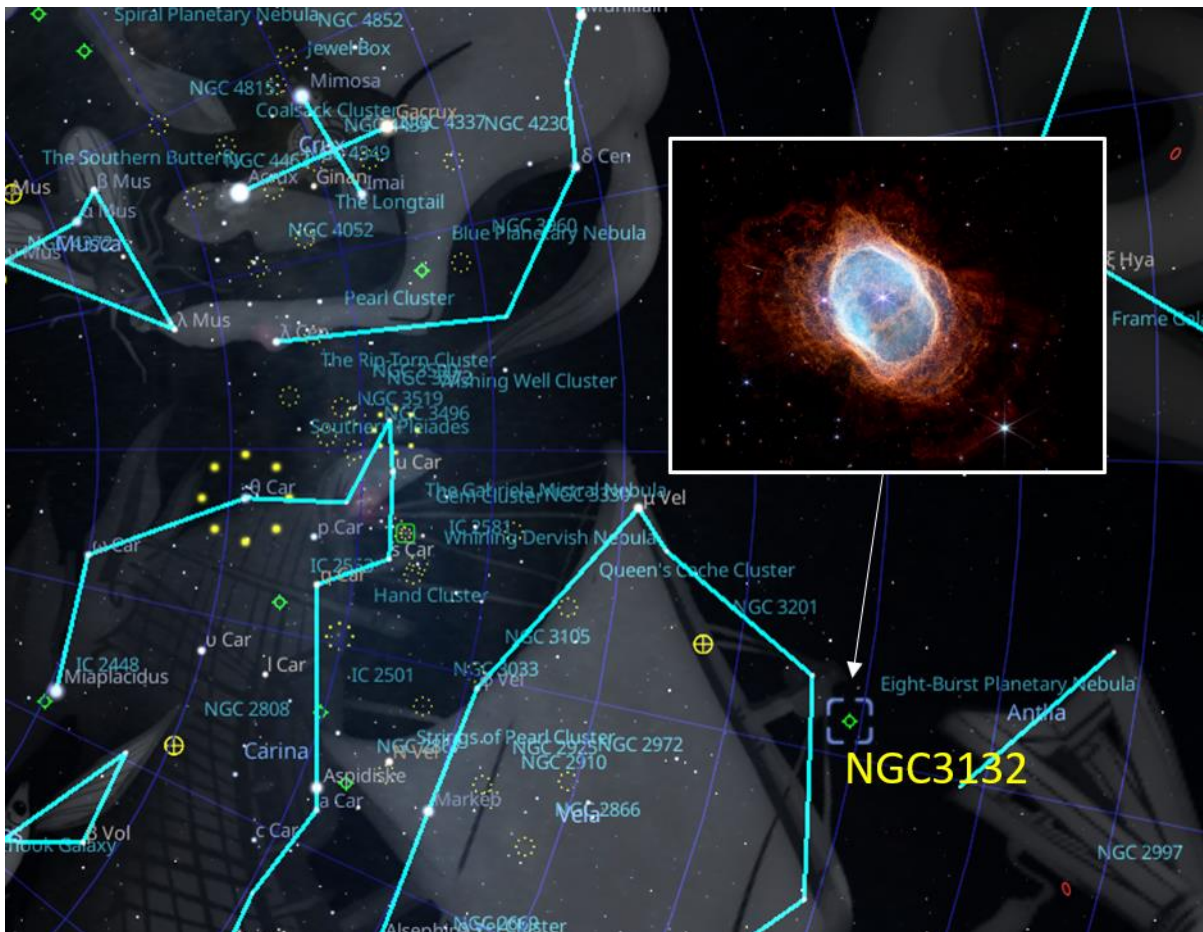


<i>Southern Sky</i>	<i>What You Might See</i>	<i>Visibility from Within the City</i>
NGC 3132 Eight-Burst Nebula in Vela	Small faint doughnut of nebulous light	Difficult to detect
NGC 2997 Spiral Galaxy in Antlia	Small faint circular smudge of light	Difficult to detect
M83 Spiral Galaxy in Hydra	Small faint circular smudge of light	Difficult to detect
M68 NGC 4590 Globular Cluster in Hydra	Small circular group of tiny stars	Detectable
NGC 5986 Globular Cluster in Lupus	Small circular group of tiny stars	Detectable
NGC 6193 Open Cluster and NGC 6188 Nebula in Ara	Small scattering of stars, some background nebulosity	Stars detectable
NGC 6397 Globular Cluster in Ara	Small circular group of tiny stars	Detectable
NGC 4372 Globular Cluster in Musca	Small circular group of tiny stars	Detectable
<i>Western Sky</i>		
M65 NGC 3623 Spiral Galaxy in Leo	Fuzzy oval of faint light	Difficult to detect
M66 NGC 3628 Spiral Galaxy in Leo	Fuzzy oval of faint light	Difficult to detect
M95 NGC 3351 Spiral Galaxy in Leo	Fuzzy oval of faint light	Difficult to detect
M96 NGC 3368 Spiral Galaxy in Leo	Fuzzy oval of faint light	Difficult to detect
M105 NGC3379 and NGC 3384 Pair of Spiral Galaxies in Leo	Two fuzzy ovals of faint light	Difficult to detect
M3 NGC 5272 Globular Cluster in Canes Venatici	Small circular group of tiny stars	Detectable
M53 NGC 5024 Globular Cluster in Coma Berenices	Small circular group of tiny stars	Detectable
<i>Northern Sky</i>		
NGC 4565 The Needle Galaxy in Coma Berenices	Faint narrow streak of light	Not detectable
M64 NGC 4826 Black Eye Galaxy in in Coma Berenices	Fuzzy oval of faint light	Difficult to detect

M51 NGC 5194 Whirlpool Galaxy in Canes Venatici	Fuzzy oval of faint light with smaller oval adjacent	Difficult to detect
M63 NGC 5055 Sunflower Galaxy in Canes Venatici	Fuzzy oval of faint light	Difficult to detect
M94 NGC 4736 Galaxy in Canes Venatici	Fuzzy oval of faint light	Difficult to detect
M86 Galaxy and the Markarian Chain of Galaxies in Virgo	Fuzzy oval of faint light	Difficult to detect
<i>Eastern Sky</i>		
M16 NGC 6611 The Eagle Nebula in Serpens	Scatter of stars with faint misty light background	Stars detectable
M17 NGC 6618 Omega Nebula/Swan Nebula in Sagittarius	Streak of misty light	Difficult to detect
M22 NGC 6656 Great Sagittarius Globular Cluster	Small circular group of tiny stars	Detectable
M8 NGC Lagoon Nebula in Sagittarius	Large patch of misty light	Difficult to detect
M20 NGC 6514 Trifid Nebula in Sagittarius	Small patch of misty light	Difficult to detect
M21 NGC 6531 Open Cluster of stars in Sagittarius	Small scattering of stars	Stars detectable
M7 NGC 6475 Ptolemy's Cluster in Scorpius	Large scattering of stars	Stars detectable
M6 NGC 6405 Butterfly Cluster	Small scattering of stars	Stars detectable
M4 NGC 6121 Spider Globular Cluster in Scorpius	Large circular group of tiny stars	Detectable
NGC 6541 Globular Cluster in Corona Australia	Small circular group of tiny stars	Detectable
NGC 6397 Ara Globular Cluster	Small circular group of tiny stars	Detectable
NGC 6231 Northern Jewel Box open cluster in Scorpius	Large scattering of bright stars	Detectable

NGC 3132 Eight-Burst Nebula in Vela

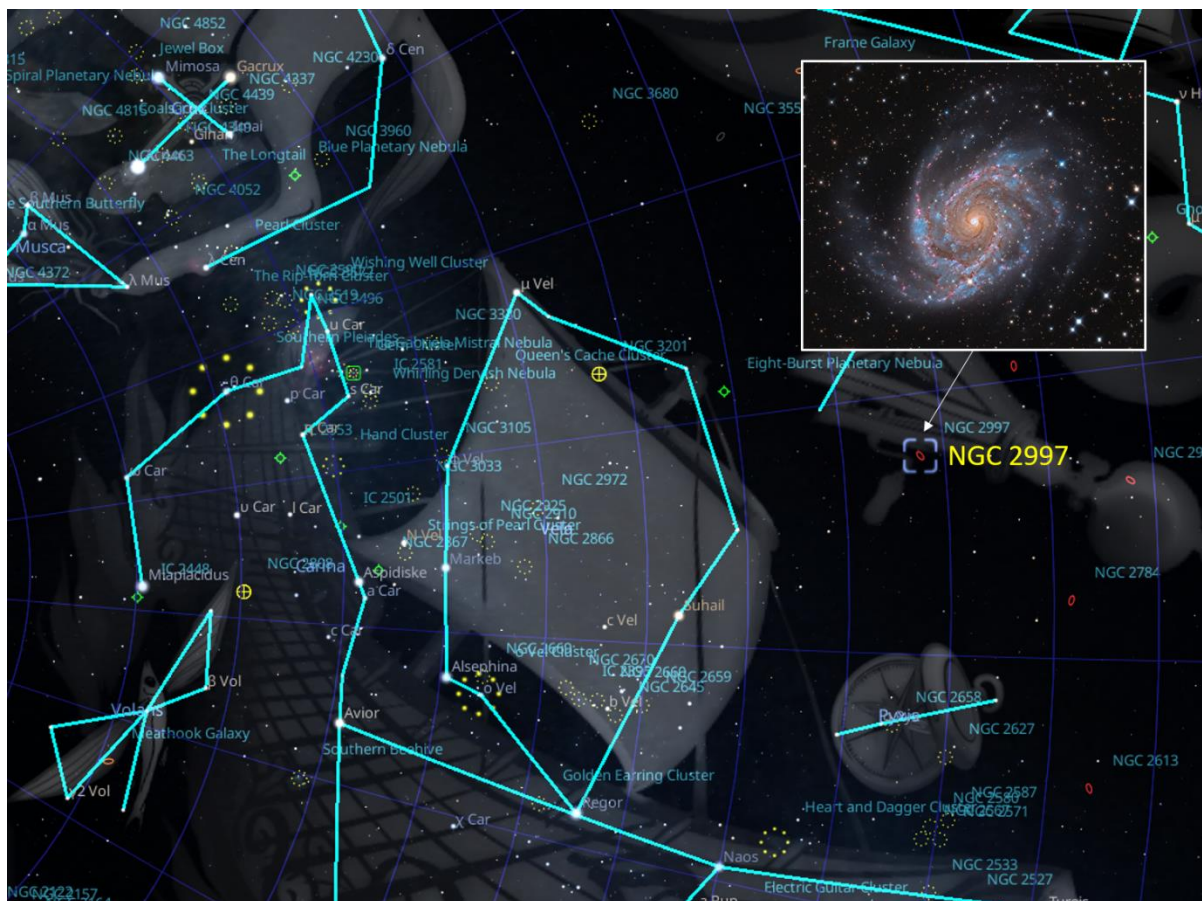
NGC 3132 (also known as the Eight-Burst Nebula, and the Southern Ring Nebula), is a bright and extensively studied planetary nebula in the constellation Vela. Its distance from Earth is estimated at about 613 pc or 2,000 light-years. More information: https://en.wikipedia.org/wiki/NGC_3132



Where to find: Beyond Crux and Carina, at the top of the sails of the Vela Constellation

NGC 2997 Spiral Galaxy in Antlia

NGC 2997 is a face-on unbarred spiral galaxy about 40 million light-years away in the faint southern constellation of Antlia. It was discovered March 4, 1793 by German-born astronomer William Herschel. J. L. E. Dreyer described it as, "a remarkable object, very faint, very large, very gradually then very suddenly bright middle and 4 arcsec nucleus". More Information: https://en.wikipedia.org/wiki/NGC_2997

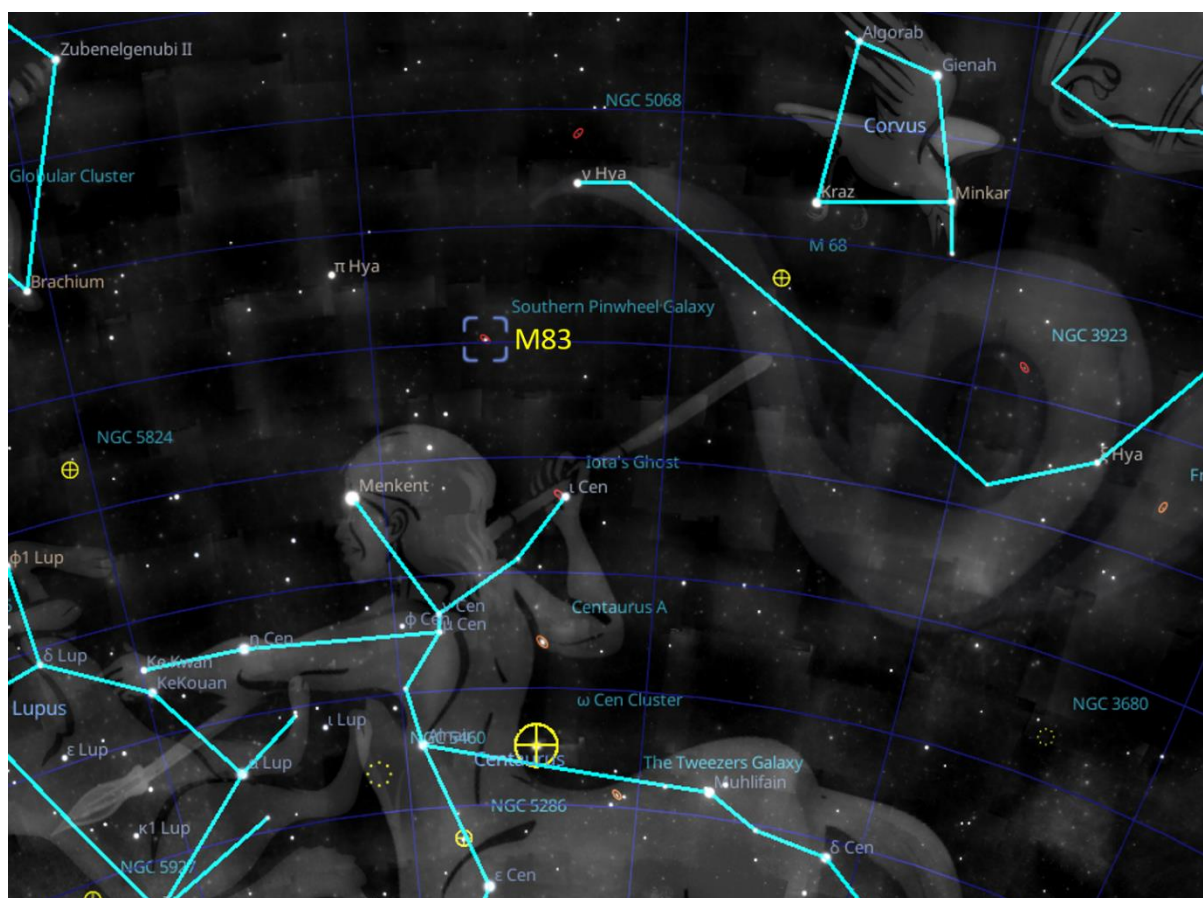


Where to find: Beyond Crux and Carina, above the sails of the Vela Constellation

M83 Spiral Galaxy in Hydra

Messier 83 or M83, also known as the Southern Pinwheel Galaxy and NGC 5236, is a barred spiral galaxy approximately 15 million light-years away in the constellation borders of Hydra and Centaurus. Nicolas-Louis de Lacaille discovered M83 on 23 February 1752 at the Cape of Good Hope. Charles Messier added it to his Messier Catalogue of nebulous objects in March 1781.

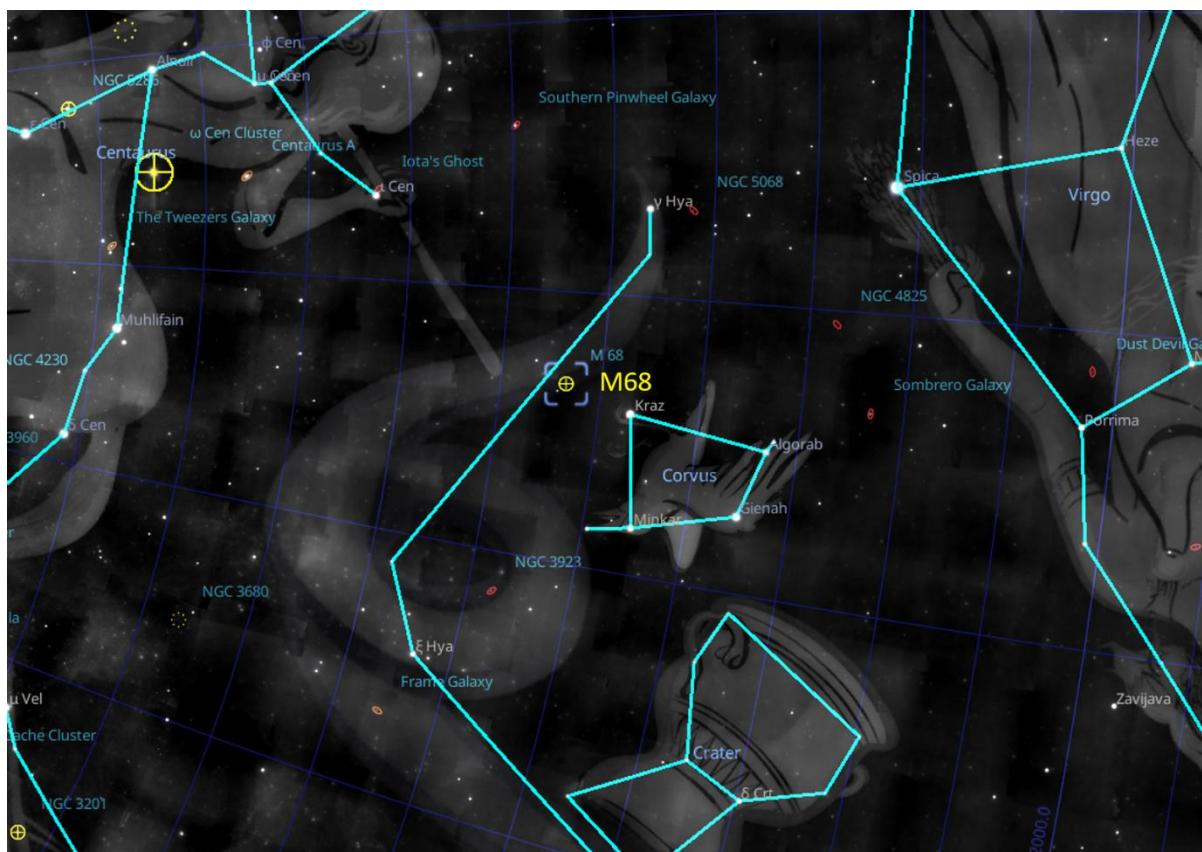
It is one of the closest and brightest barred spiral galaxies in the sky, and is visible with binoculars. It has a diameter of about 118,000 light-years. Its nickname of the Southern Pinwheel derives from its resemblance to the Pinwheel Galaxy, M101. More Information: https://en.wikipedia.org/wiki/Messier_83



Where to find: Between the tail of Hydra and the head of Centaurus.

M68 NGC 4590 Globular Cluster in Hydra

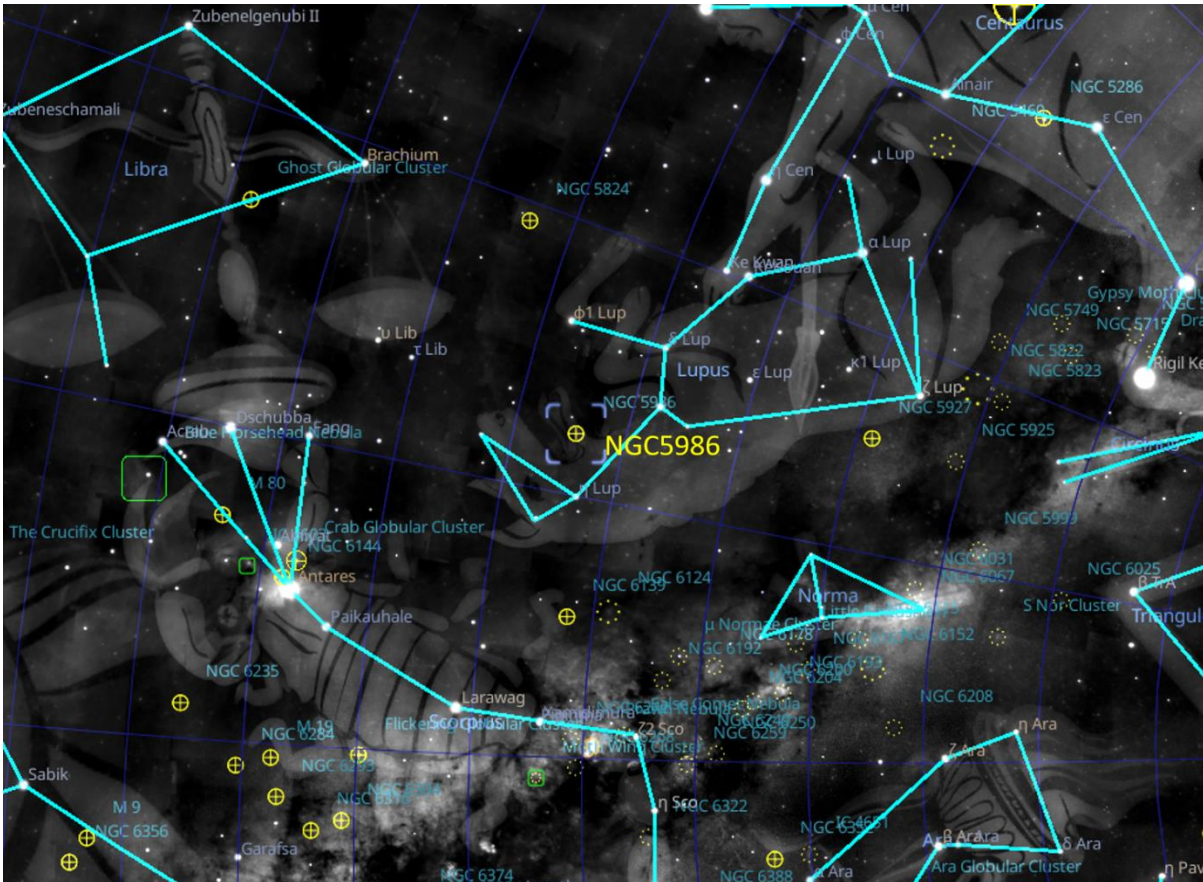
Messier 68 or NGC 4590 is a globular cluster found in the east south-east of Hydra. It was discovered by Charles Messier in 1780. William Herschel described it as "a beautiful cluster of stars, extremely rich, and so compressed that most of the stars are blended together". His son John noted that it was "all clearly resolved into stars of 12th magnitude, very loose and ragged at the borders". M68 is centered about 33,600 light-years away from Earth. More Information: https://en.wikipedia.org/wiki/Messier_68



Where to find: Between the tail of Hydra and Corvus.

NGC 5986 Globular Cluster in Lupus

NGC 5986 is a globular cluster of stars in the southern constellation of Lupus, located at a distance of approximately 34,000 light-years from the Sun. It was discovered by Scottish astronomer James Dunlop on May 10, 1826. John L. E. Dreyer described it as, "a remarkable object, a globular cluster, very bright, large, round, very gradually brighter middle, stars of 13th to 15th magnitude". Its prograde–retrograde orbit through the Milky Way galaxy is considered irregular and highly eccentric. More Information: https://en.wikipedia.org/wiki/NGC_5986



Where to find: Not far from Scorpius, in the throat of Lupus.

NGC 6193 Open Cluster and NGC 6188 Nebula in Ara

NGC 6188 is an emission nebula located about 4,000 light years away in the constellation Ara. The bright open cluster NGC 6193, visible to the naked eye, is responsible for a region of reflection nebulosity within NGC 6188. NGC 6188 is a star forming nebula, and is sculpted by the massive, young stars that have recently formed there – some are only a few million years old. This spark of formation was probably caused when the last batch of stars went supernova. The nebula is a common astrophotography target called "The Fighting Dragons of Ara". More Information: https://en.wikipedia.org/wiki/NGC_6188



Where to find: Below one of the corners of Ara and not far from the tail of Scorpis

NGC 6397 Globular Cluster in Ara

NGC 6397 is a globular cluster in the constellation Ara. It is located about 7,800 light-years from Earth, making it one of the two nearest globular clusters to Earth, the other one being Messier 4. The cluster contains around 400,000 stars, and can be seen with the naked eye under good observing conditions. NGC 6397 is one of at least 20 globular clusters of the Milky Way Galaxy that have undergone a core collapse, meaning that the core has contracted to a very dense stellar agglomeration. More Information: https://en.wikipedia.org/wiki/NGC_6397



Where to find: Near the center of Ara and not far from the tail of Scorpius

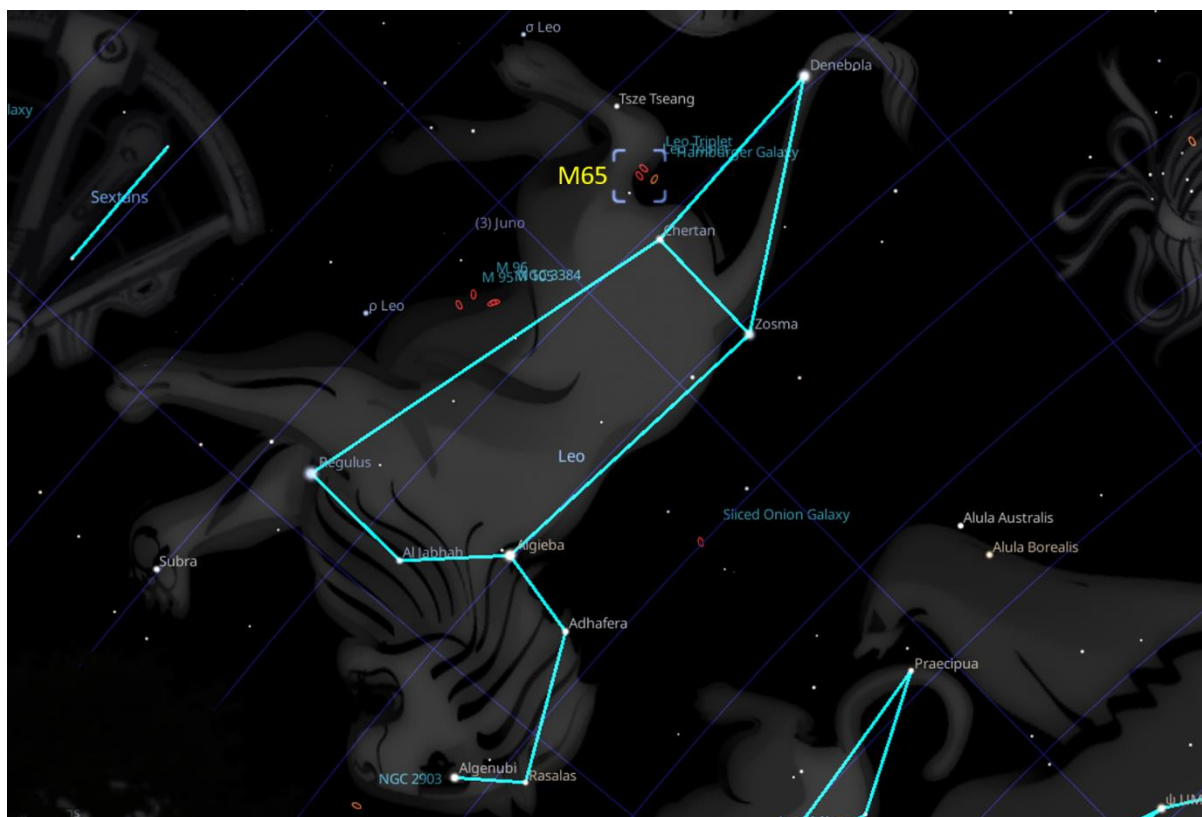
NGC 4372 Globular Cluster in Musca

NGC 4372 is a globular cluster in the southern constellation of Musca. It is southwest of γ Muscae (Gamma Muscae) and west of the southern end of the Dark Doodad Nebula (Sandqvist 149), a 3° thin streak of black across a southern section of the great plane of the Milky Way.

NGC 4372 "is partially obscured by dust lanes, but still appears as a large object some 10 arcseconds in diameter," according to Astronomy of the Milky Way (2004). More Information: https://en.wikipedia.org/wiki/NGC_4372

M65 NGC 3623 Spiral Galaxy in Leo

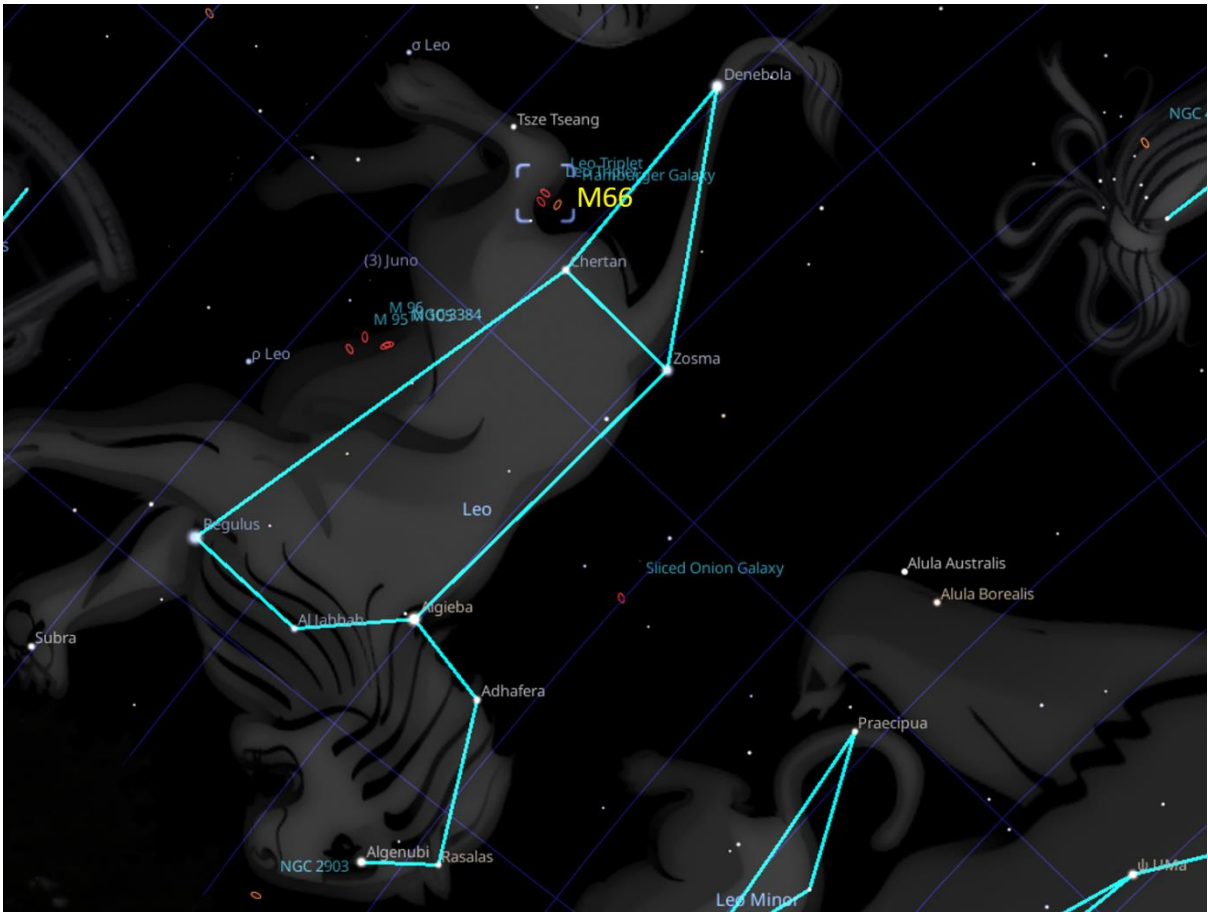
Messier 65, also known as NGC 3623, is an intermediate spiral galaxy about 35 million light-years away in the constellation Leo. It was discovered by Charles Messier in 1780. With M66 and NGC 3628, it forms the Leo Triplet, a small close group of galaxies. More Information: https://en.wikipedia.org/wiki/Messier_65



Where to find: Below the back legs of Leo

M66 NGC 3627 Spiral Galaxy in Leo

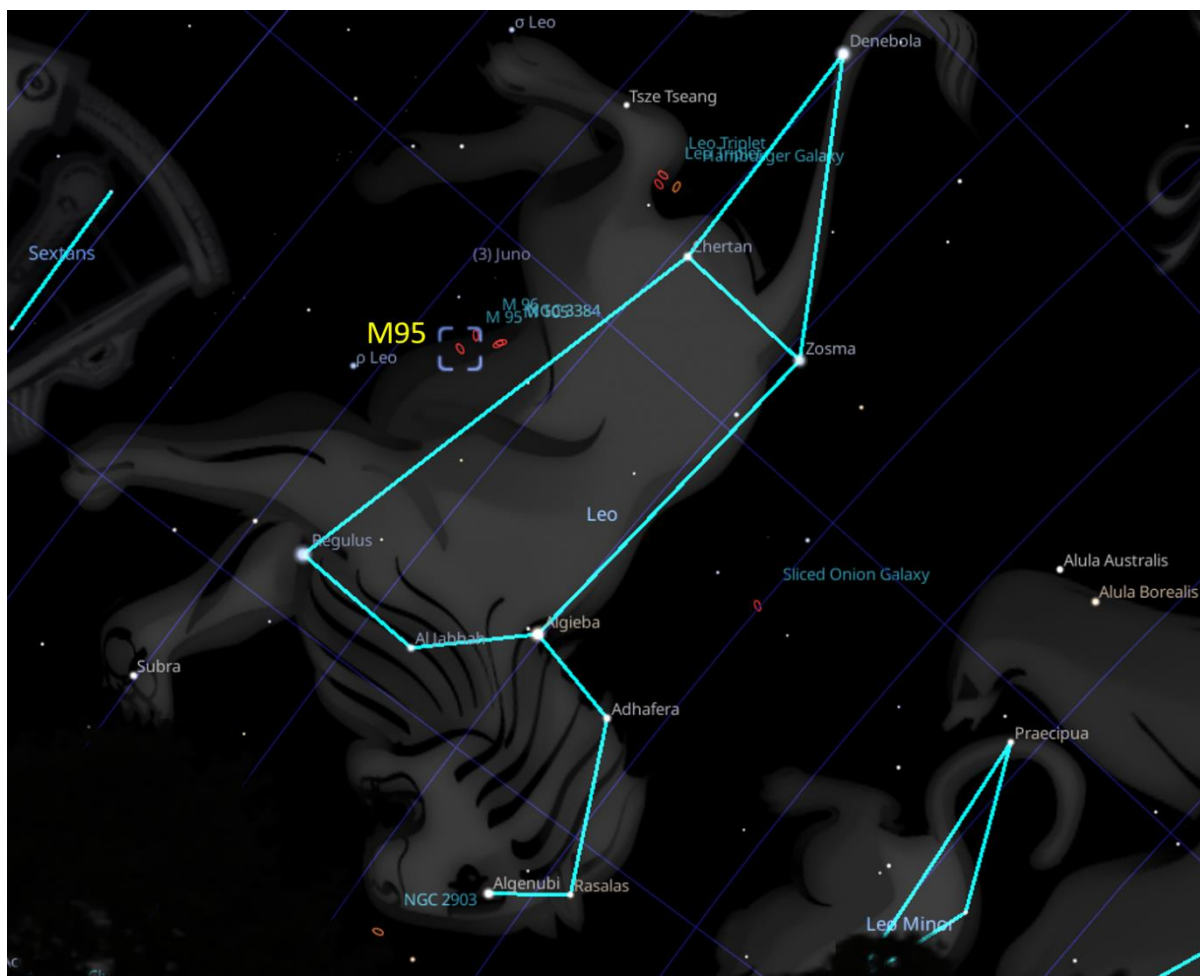
Messier 66 or M66, also known as NGC 3627, is an intermediate spiral galaxy in the constellation of Leo. It was discovered by French astronomer Charles Messier on 1 March 1780, who described it as "very long and very faint". This galaxy is a member of a small group of galaxies that includes M65 and NGC 3628, known as the Leo Triplet or the M66 Group. M65 and M66 are a common object for amateur astronomic observation, being separated by only 20'. More Information: https://en.wikipedia.org/wiki/Messier_66



Where to find: Below the back legs of Leo

M95 NGC 3351 Spiral Galaxy in Leo

Messier 95, also known as M95 or NGC 3351, is a barred spiral galaxy about 33 million light-years away in the zodiac constellation Leo. It was discovered by Pierre Méchain in 1781, and catalogued by compatriot Charles Messier four days later. In 2012 its most recent supernova was discovered. M95 is one of several galaxies within the M96 Group, a group of galaxies in the constellation Leo, the other Messier objects of which are M96 and M105. More Information: https://en.wikipedia.org/wiki/Messier_95

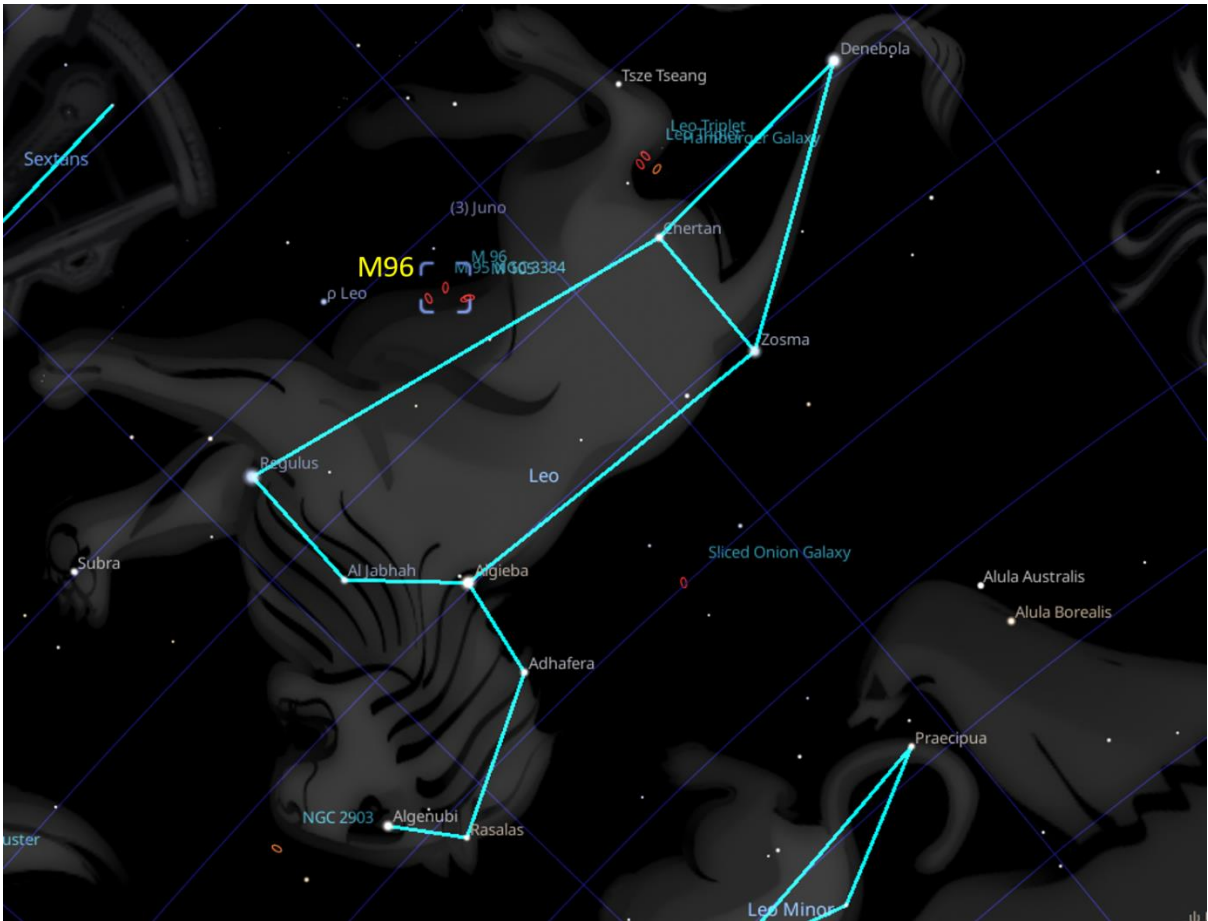


Where to find: Below the belly of Leo

M96 NGC 3368 Spiral Galaxy in Leo

Messier 96, also known as NGC 3368, is an intermediate spiral galaxy about 31 million light-years away in the constellation Leo.

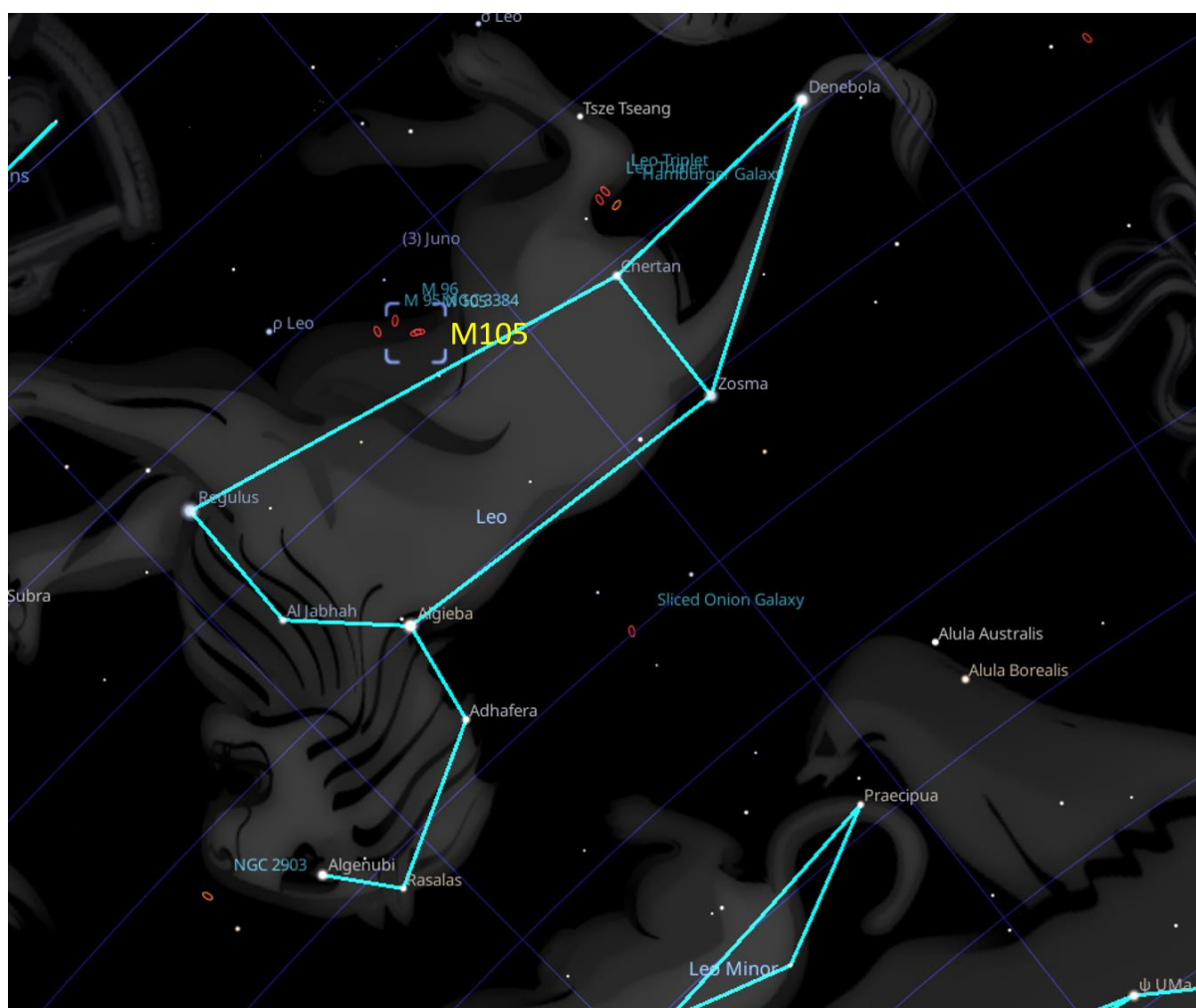
It was discovered by French astronomer Pierre Méchain in 1781. After communicating his finding, French astronomer Charles Messier confirmed the finding four days later and added it to his catalogue of nebulous objects. More Information: https://en.wikipedia.org/wiki/Messier_96



Where to find: Below the belly of Leo

M105 NGC3379 and NGC 3384 Pair of Spiral Galaxies in Leo

Messier 105, also known as NGC 3379, is an elliptical galaxy 36.6 million light-years away in the constellation of Leo. It is the biggest elliptical galaxy in the Messier catalogue that is not in the Virgo cluster. It was discovered by Pierre Méchain in 1781, just a few days after he discovered the nearby galaxies Messier 95 and Messier 96. This galaxy is one of a few not object-verified by Messier so omitted in the editions of his Catalogue of his era. It was appended when Helen S. Hogg found a letter by Méchain locating and describing this object which matched those aspects under its first-published name, NGC 3379. More Information: https://en.wikipedia.org/wiki/Messier_105

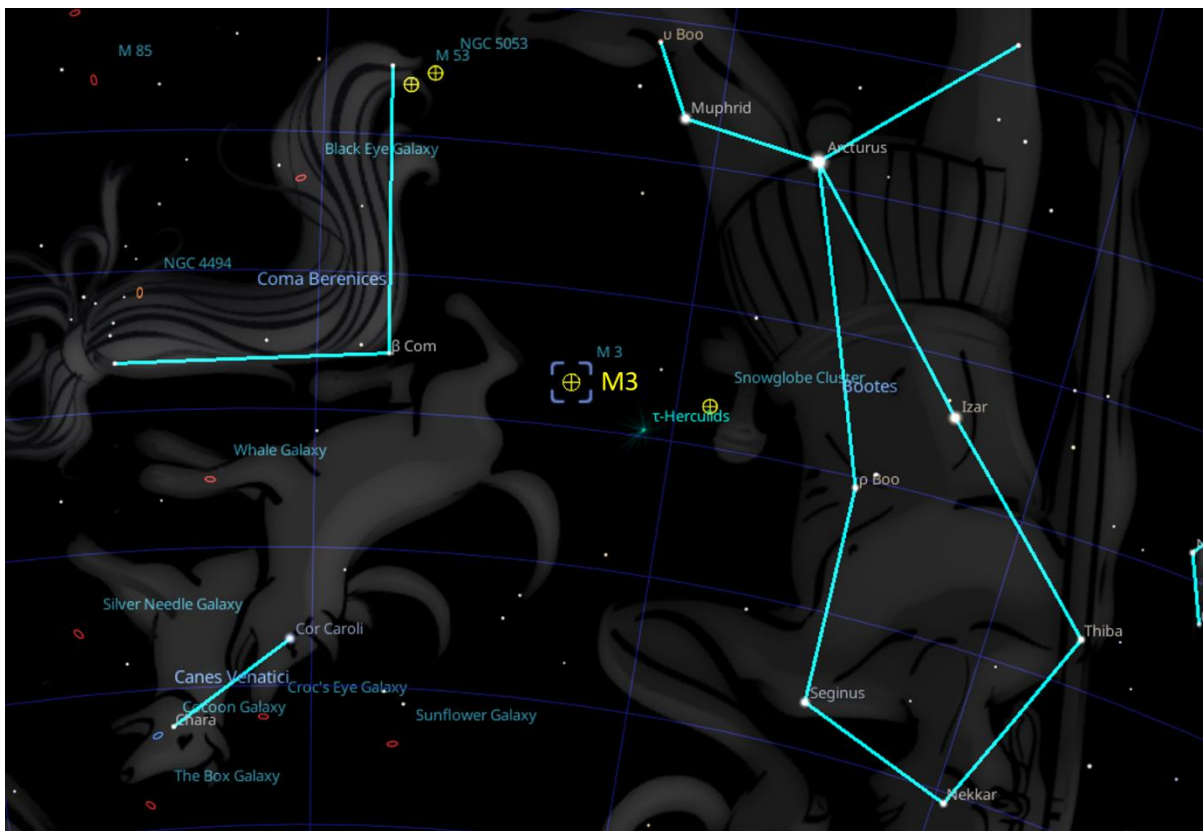


Where to find: Below the belly of Leo

M3 NGC 5272 Globular Cluster in Canes Venatici

Messier 3, also NGC 5272, is a globular cluster of stars in the northern constellation of Canes Venatici. It was discovered on May 3, 1764, and was the first Messier object to be discovered by Charles Messier himself. Messier originally mistook the object for a nebula without stars. This mistake was corrected after the stars were resolved by William Herschel around 1784. Many amateur astronomers consider it one of the finest northern globular clusters, following only Messier 13. With a moderate-sized telescope, the cluster can be

seen as a cloudy smudge even in severely light-polluted skies, and can be further defined in darker conditions. More Information: https://en.wikipedia.org/wiki/Messier_3

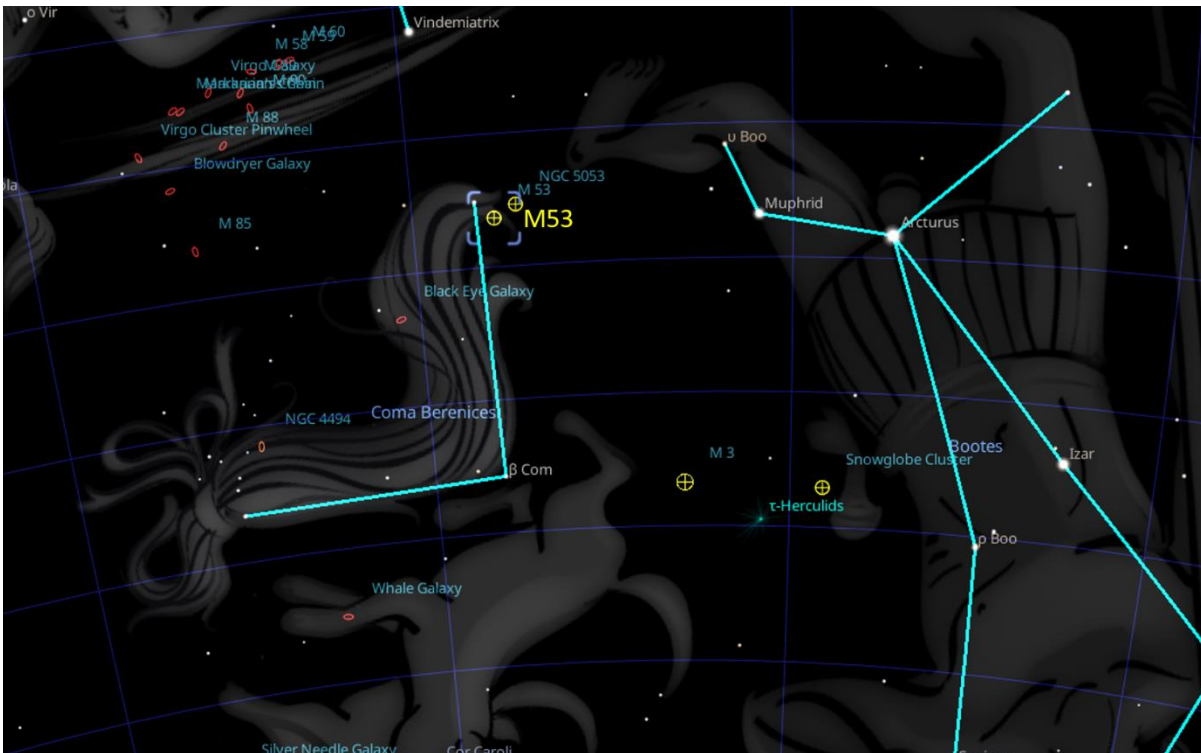


Where to Find: Between Coma Berenices and Boötes

M53 NGC 5024 Globular Cluster in Coma Berenices

Messier 53, also known as NGC 5024, is a globular cluster in the Coma Berenices constellation. It was discovered by Johann Elert Bode in 1775. M53 is one of the more outlying globular clusters, being about 60,000 light-years away from the Galactic Center, and almost the same distance, about 58,000 light-years, from the Solar System.

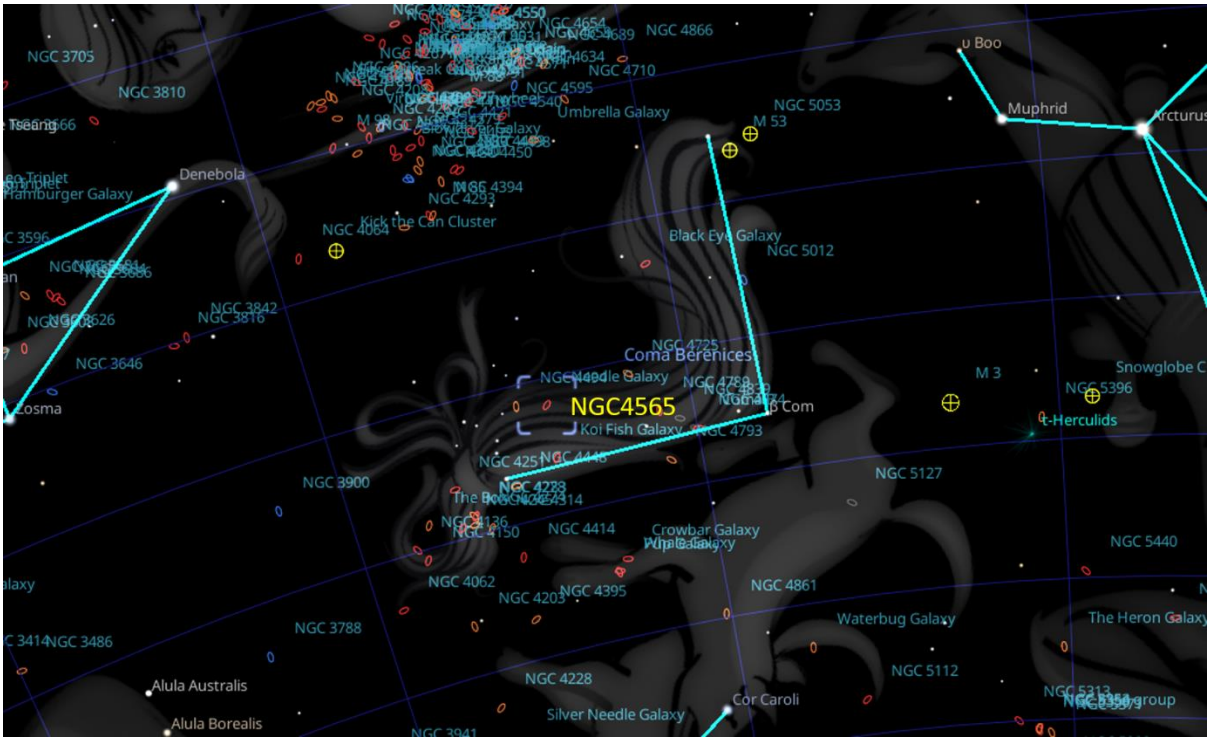
The cluster displays various tidal-like features including clumps and ripples around the cluster, and tails along the cluster's orbit in an east–west direction. A tidal bridge-like structure appears to connect M53 with the close, very diffuse neighbor NGC 5053, as well as an envelope surrounding both clusters. More Information: https://en.wikipedia.org/wiki/Messier_53



Where to Find: Near a corner of Coma Berenices

NGC 4565 The Needle Galaxy in Coma Berenices

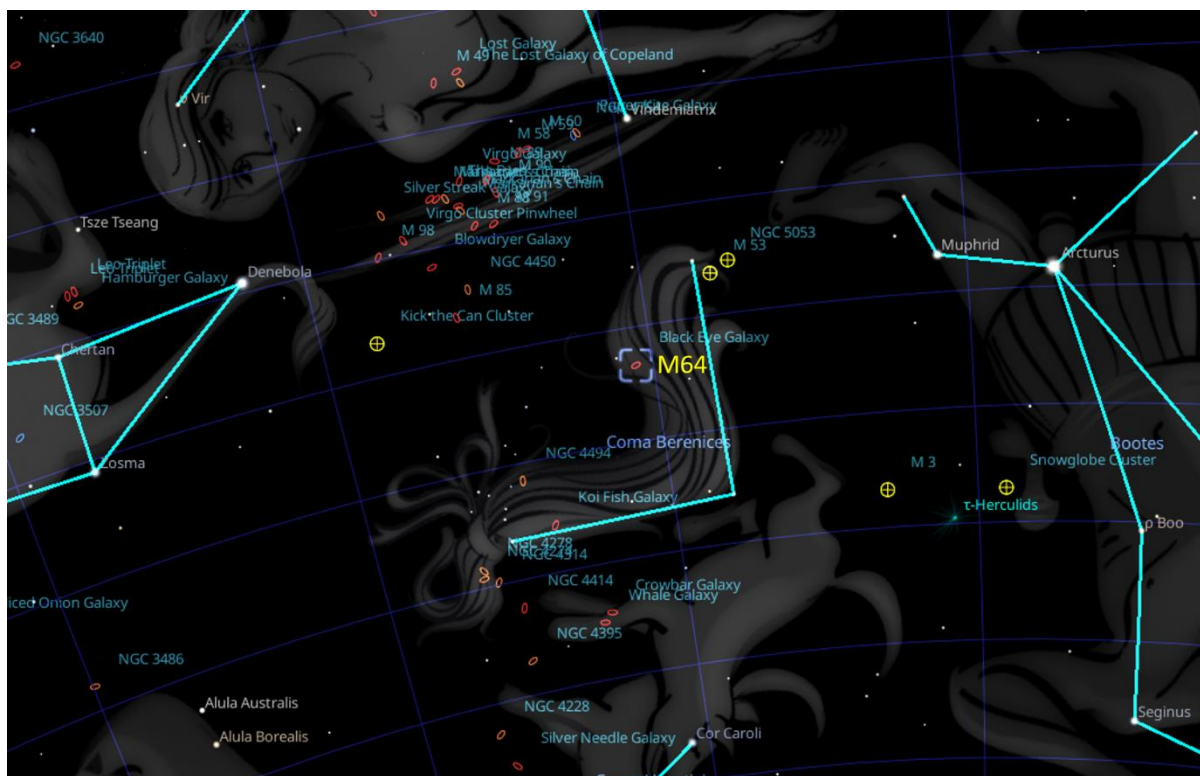
NGC 4565, also known as the Needle Galaxy, is an edge-on spiral galaxy about 30 to 50 million light-years away in the constellation Coma Berenices. It lies close to the North Galactic Pole and has a visual magnitude of approximately 10. It is known as the Needle Galaxy for its narrow profile. First recorded in 1785 by William Herschel, it is a prominent example of an edge-on spiral galaxy. NGC 4565 is a giant spiral galaxy more luminous than the Andromeda Galaxy. More Information: https://en.wikipedia.org/wiki/NGC_4565



Where to Find: Near a corner of Coma Berenices

M64 NGC 4826 Black Eye Galaxy in in Coma Berenices

The Black Eye Galaxy, also called Sleeping Beauty Galaxy or Evil Eye Galaxy and designated Messier 64, or NGC 4826, is a relatively isolated spiral galaxy 17 million light-years away in the constellation of Coma Berenices. It was discovered by Edward Pigott in March 1779, and independently by Johann Elert Bode in April of the same year, as well as by Charles Messier the next year. A dark band of absorbing dust partially in front of its bright nucleus gave rise to its nicknames of the "Black Eye", "Evil Eye", or "Sleeping Beauty" galaxy. More Information: https://en.wikipedia.org/wiki/Black_Eye_Galaxy

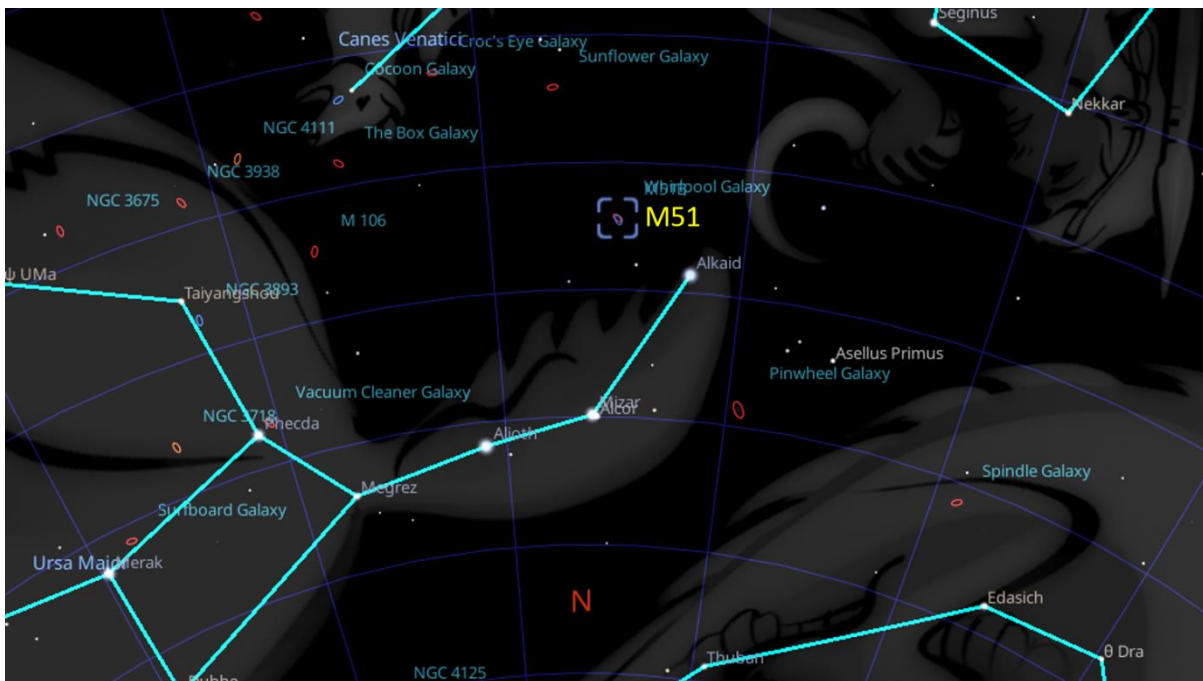


Where to Find: About one third of the way along the hypotenuse of Come Berenices.

M51 NGC 5194 Whirlpool Galaxy in Canes Venatici

The Whirlpool Galaxy, also known as Messier 51a or NGC 5194, is an interacting grand-design spiral galaxy with an active galactic nucleus. It lies in the constellation Canes Venatici, and was the first galaxy to be classified as a spiral galaxy. It is 23.5 million light-years away and 76,900 ly in diameter.

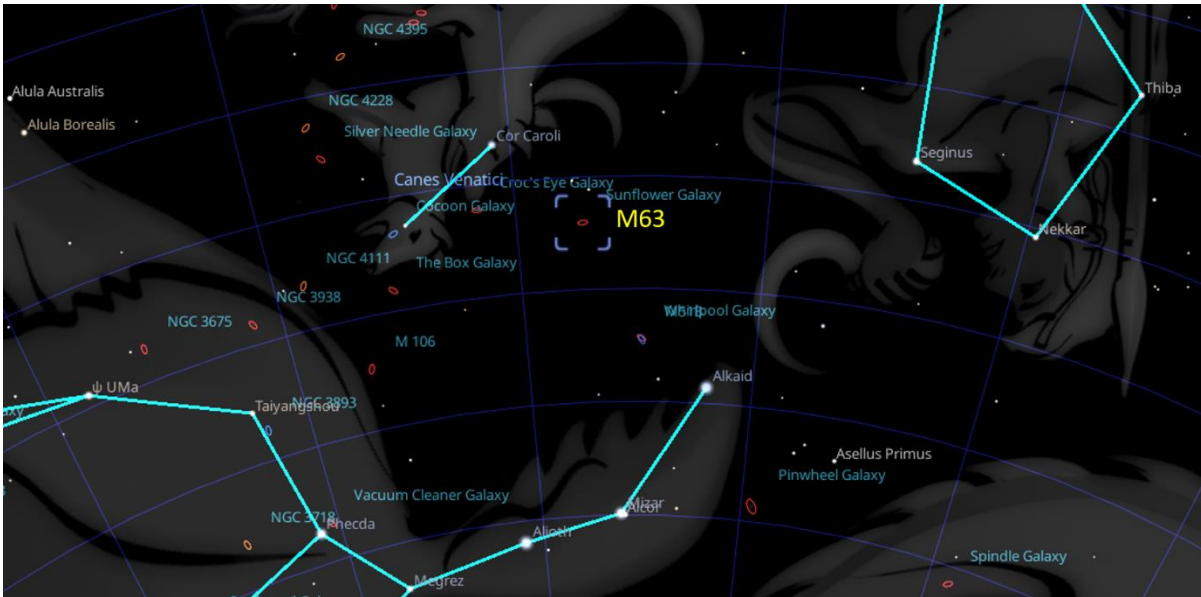
Whilst low in the northern sky, the galaxy and its companion, NGC 5195, are easily observed by amateur astronomers, and the two galaxies may be seen with binoculars. The Whirlpool Galaxy has been extensively observed by professional astronomers, who study it and its pair with NGC 5195 to understand galaxy structure, particularly structure associated with the spiral arms, and galaxy interactions. Its pair with NGC 5195 is among the most famous and relatively close interacting systems, and thus is a favorite subject of galaxy interaction models. More Information: https://en.wikipedia.org/wiki/Whirlpool_Galaxy



Where to Find: Near the tail of the Big Bear, Ursa Major.

M63 NGC 5055 Sunflower Galaxy in Canes Venatici

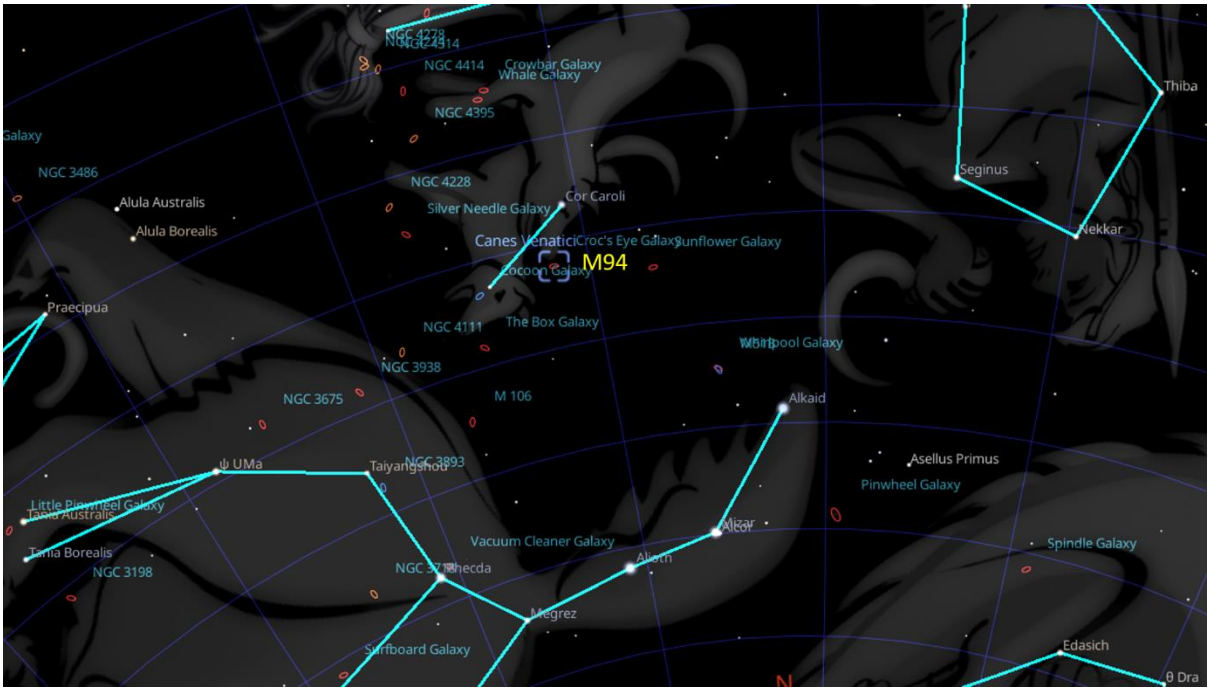
Messier 63, also known as NGC 5055 or the Sunflower Galaxy, is a spiral galaxy in the northern constellation of Canes Venatici with approximately 400 billion stars. M63 was first discovered by the French astronomer Pierre Méchain, then later verified by his colleague Charles Messier on June 14, 1779. The galaxy became listed as object 63 in the Messier Catalogue. In the mid-19th century, Anglo-Irish astronomer Lord Rosse identified spiral structures within the galaxy, making this one of the first galaxies in which such structure was identified. More Information: https://en.wikipedia.org/wiki/Messier_63



Where to Find: Off to one side of Canes Venatici

M94 NGC 4736 Galaxy in Canes Venatici

Messier 94, also known as NGC 4736, Cat's Eye Galaxy, Crocodile Eye Galaxy, or Croc's Eye Galaxy is a spiral galaxy in the mid-northern constellation Canes Venatici. It was discovered by Pierre Méchain in 1781, and catalogued by Charles Messier two days later. Although some references describe M94 as a barred spiral galaxy, the "bar" structure appears to be more oval-shaped. The galaxy has two ring structures. More Information: https://en.wikipedia.org/wiki/Messier_94

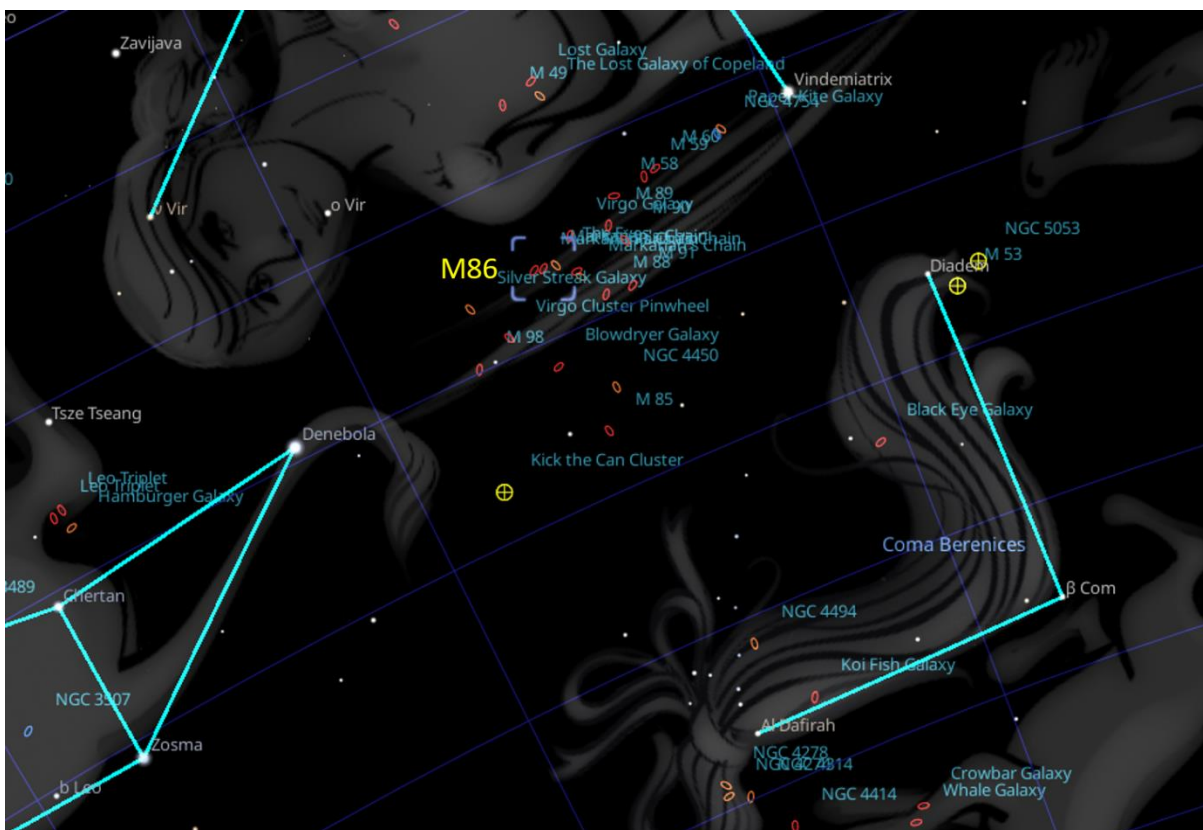


Where to find: Close to Canes Venatici

M86 Galaxy and the Markarian Chain of Galaxies in Virgo

Messier 86, also known as NGC 4406, is an elliptical or lenticular galaxy in the constellation Virgo. It was discovered by Charles Messier in 1781. M86 lies in the heart of the Virgo Cluster of galaxies and forms a most conspicuous group with another large galaxy known as Messier 84. It displays the highest blue shift of all Messier objects, as it is, net of its other vectors of travel, approaching the Milky Way at 244 km/s. This is due to both galaxies falling roughly towards the center of the Virgo cluster from opposing ends.

Galaxy M86 is just one of multiple galaxies that create an alignment named Markarian's Chain - a stretch of galaxies that forms part of the Virgo Cluster. When viewed from Earth, the galaxies lie along a smoothly curved line. Charles Messier first discovered two of the galaxies, M84 and M86, in 1781. The other galaxies seen in the chain were discovered by William Herschel. The bright members of the chain are visible through small telescopes. Larger telescopes can be used to view the fainter galaxies. Near the center there appear the pair of interacting galaxies NGC 4438 and NGC 4435, about 50 million light-years away, known to some as Markarian's Eyes. More Information: https://en.wikipedia.org/wiki/Messier_86 and https://en.wikipedia.org/wiki/Markarian%27s_Chain



Where to Find: Near the intersections of constellations Leo, Canes Venatici and Virgo.

Eastern Sky

M16 NGC 6611 The Eagle Nebula in Serpens

The Eagle Nebula, catalogued as Messier 16 and as NGC 6611, and also known as the Star Queen Nebula, is a young open cluster of stars in the constellation Serpens, discovered by Jean-Philippe de Cheseaux in 1745–46. Both the "Eagle" and the "Star Queen" refer to visual impressions of the dark silhouette near the center of the nebula, an area made famous as the "Pillars of Creation" imaged by the Hubble Space Telescope. The nebula contains several active star-forming gas and dust regions, including the aforementioned Pillars of Creation. The Eagle Nebula lies in the Sagittarius Arm of the Milky Way. More Information:

https://en.wikipedia.org/wiki/Eagle_Nebula



Where to Find: Above the lid of the Sagittarius "Tea Pot" towards the constellation Scutum

M17 NGC 6618 Omega Nebula/Swan Nebula in Sagittarius

The Omega Nebula, also known as Messier 17 or NGC 6618, is an hydrogen II region in the constellation Sagittarius. It was discovered by Philippe Loys de Chéseaux in 1745. Charles Messier catalogued it in 1764. It is located near some of the richest starfields of the Milky Way in the northern two-thirds of Sagittarius.

The Omega Nebula is between 5,000 and 6,000 light-years from Earth and it spans some 15 light-years in diameter. The cloud of interstellar matter of which this nebula is a part is roughly 40 light-years in diameter and has a mass of 30,000 solar masses. The total mass of the Omega Nebula is an estimated 800 solar masses. It is considered one of the brightest and most massive star-forming regions of our galaxy. Its local geometry is similar to the Orion Nebula except that it is viewed edge-on rather than face-on. More Information: https://en.wikipedia.org/wiki/Omega_Nebula



Where to Find: Above the lid of the Sagittarius "Tea Pot" towards the constellation Scutum

M22 NGC 6656 Great Sagittarius Globular Cluster

Messier 22, also known as NGC 6656 or the Great Sagittarius Cluster, is an elliptical globular cluster of stars in the constellation Sagittarius, near the galactic bulge region. It is one of the brightest globulars visible in the night sky. The brightest stars are 11th magnitude, with hundreds of stars bright enough to resolve with an 8" telescope. It is northwest of Lambda Sagittarii (Kaus Borealis), the northernmost star of the "Teapot" asterism.

M22 was one of the first globulars to be discovered, in 1665 by Abraham Ihle and it was included in Charles Messier's catalog of comet-like objects in 1764. It was one of the first globular clusters to be carefully studied – first by Harlow Shapley in 1930. He placed within it roughly 70,000 stars and found it had a dense core.

M22 is one of the nearer globular clusters to Earth – at about 10,600 light-years away. It spans 32' on the sky which means its diameter is 99 ± 9 light-years. 32 variable stars have been recorded in M22. More Information: https://en.wikipedia.org/wiki/Messier_22

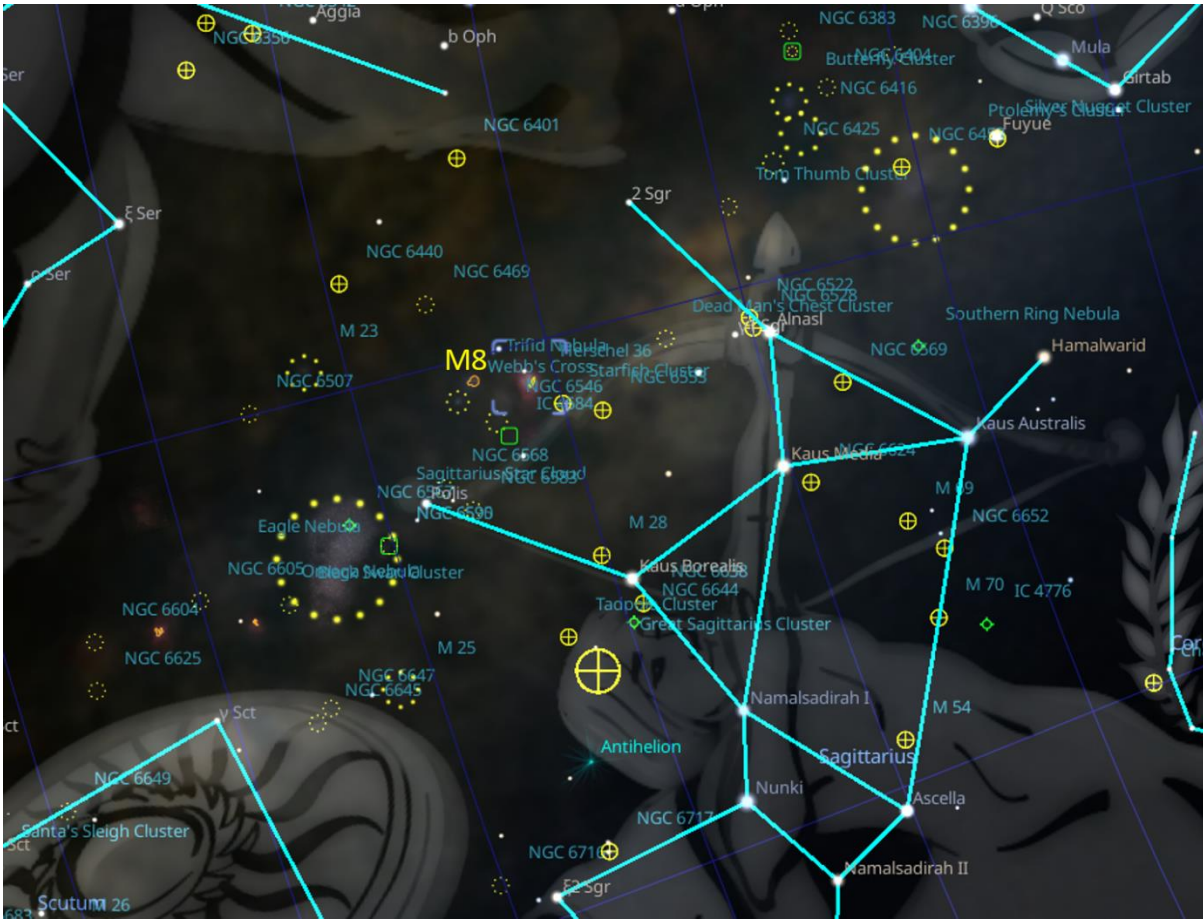


Where to Find: Above the lid of the Sagittarius “Tea Pot” asterism

M8 NGC Lagoon Nebula in Sagittarius

The Lagoon Nebula, catalogued as Messier 8 or NGC 6523, is a giant interstellar cloud in the constellation Sagittarius. It is classified as an emission nebula and as an hydrogen II region.

The Lagoon Nebula was discovered by Giovanni Hodierna before 1654 and is one of only two star-forming nebulae faintly visible to the eye from mid-northern latitudes. Seen with binoculars, it appears as a distinct cloud-like patch with a definite core. Within the nebula is the open cluster NGC 6530. The Lagoon Nebula is estimated to be between 4,000–6,000 light-years away from the Earth. In the sky of Earth, it spans 90' by 40', which translates to an actual dimension of 110 by 50 light years. Like many nebulae, it appears pink in time-exposure color photos but is gray to the eye peering through binoculars or a telescope, human vision having poor color sensitivity at low light levels. More Information: https://en.wikipedia.org/wiki/Lagoon_Nebula



Where to Find: Above the lid of the Sagittarius “Tea Pot” asterism

M20 NGC 6514 Trifid Nebula in Sagittarius

The Trifid Nebula, catalogued as Messier 20 and as NGC 6514, is an hydrogen II region in the north-west of Sagittarius. It was discovered by Charles Messier on June 5, 1764. Its name means 'three-lobe'. The object is an unusual combination of an open cluster of stars, an emission nebula (the relatively dense, reddish-pink portion), a reflection nebula (the mainly NNE blue portion), and a dark nebula (the apparent 'gaps' in the former that cause the trifurcated appearance, also designated as dark nebula Barnard 85). Viewed through a small telescope, the Trifid Nebula is a bright and peculiar object, and is thus a perennial favorite of amateur astronomers. The most massive star that has formed in this region is HD 164492A, with a mass more than 20 times the mass of the Sun. This star is surrounded by a cluster of approximately 3100 young stars. More Information: https://en.wikipedia.org/wiki/Trifid_Nebula



Where to Find: Above the lid of the Sagittarius “Tea Pot” asterism

M21 NGC 6531 Open Cluster of stars in Sagittarius

Messier 21, also designated NGC 6531, is an open cluster of stars located to the north-east of Sagittarius, close to the Messier objects M20 to M25. It was discovered and catalogued by Charles Messier on June 5, 1764. This cluster is relatively young and tightly packed. A few blue giant stars have been identified in the cluster, but Messier 21 is composed mainly of small dim stars. With a magnitude of 6.5, M21 is not visible to the naked eye; however, with the smallest binoculars it can be easily spotted on a dark night. The cluster is positioned near the Trifid nebula (NGC 6514), but is not associated with that nebulosity. More Information: https://en.wikipedia.org/wiki/Messier_21



Where to Find: Above the lid of the Sagittarius “Tea Pot” asterism

M7 NGC 6475 Ptolemy's Cluster in Scorpius

Messier 7, also designated NGC 6475 and Ptolemy's Cluster, is an open cluster of stars in the constellation of Scorpius. The cluster is easily detectable with the naked eye, close to the "stinger" of Scorpius. With a declination of -34.8° , it is the southernmost Messier object.

M7 has been known since antiquity. It was first recorded by the 2nd-century Greek-Roman astronomer Ptolemy, who described it as a nebula in 130 AD. Italian astronomer Giovanni Batista Hodierna observed it before 1654 and counted 30 stars in it. In 1764, French astronomer Charles Messier catalogued the cluster as the seventh member in his list of comet-like objects. English astronomer John Herschel described it as "coarsely scattered clusters of stars".

Telescopic observations of the cluster reveal about 80 stars within a field of view of 1.3° across. At the cluster's estimated distance of 980 light years this corresponds to an actual diameter of 25 light years. The tidal radius of the cluster is 40.1 light-years and it has a combined mass of about 735 times the mass of the Sun. The age of the cluster is around 200 million years. More Information:

https://en.wikipedia.org/wiki/Messier_7



Where to Find: Between the spout of the Sagittarius "Tea Pot" asterism and the tail of Scorpius.

M6 NGC 6405 Butterfly Cluster

The Butterfly Cluster, cataloged as Messier 6 and as NGC 6405, is an open cluster of stars in the southern constellation of Scorpius. Its name derives from the vague resemblance of its shape to a butterfly. The first astronomer to record the Butterfly Cluster's existence was Giovanni Battista Hodierna in 1654. However, Robert Burnham Jr. has proposed that the 2nd century astronomer Ptolemy may have seen it with the naked eye while observing its neighbor the Ptolemy Cluster (M7). Credit for the discovery is usually given to Jean-Philippe Loys de Chéseaux in 1746. Charles Messier observed the cluster on May 23, 1764, and added it to his Messier Catalog.

Estimates of the Butterfly Cluster's distance have varied over the years. Wu et al. (2009) found a distance estimate of 1,590 light-years, giving it a spatial diameter of some 12 light years. The cluster is estimated to be 94.2 million years old. More Information: https://en.wikipedia.org/wiki/Butterfly_Cluster



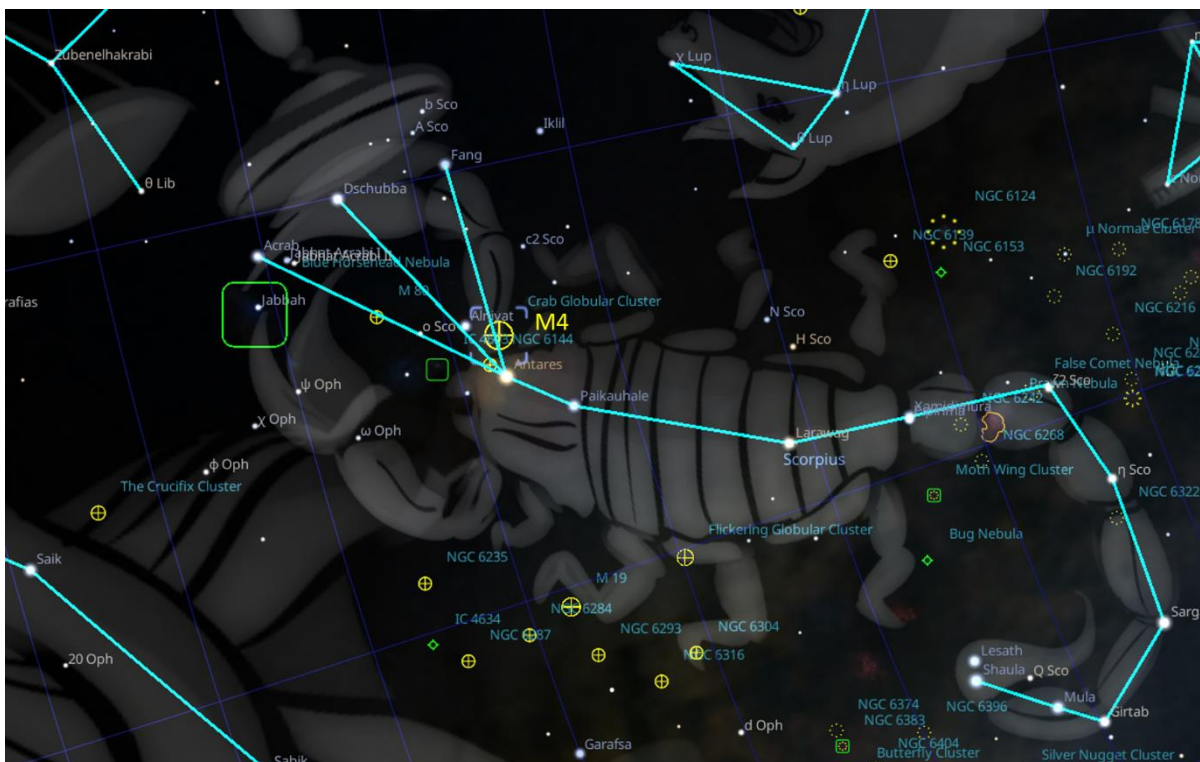
Where to Find: Between the spout of the Sagittarius “Tea Pot” asterism and the tail of Scorpius.

M4 NGC 6121 Spider Globular Cluster in Scorpius

Messier 4, also known as NGC 6121 or the Spider Globular Cluster, is a globular cluster in the constellation of Scorpius. It was discovered by Philippe Loys de Chéseaux in 1745 and catalogued by Charles Messier in 1764. It was the first globular cluster in which individual stars were resolved. M4 is conspicuous in even the smallest of telescopes as a fuzzy ball of light. It appears about the same size as the Moon in the sky. It is one

of the easiest globular clusters to find, being located only 1.3 degrees west of the bright star Antares, with both objects being visible in a wide-field telescope. Modestly sized telescopes will begin to resolve individual stars, of which the brightest in M4 are of apparent magnitude 10.8.

M4 is a rather loosely concentrated cluster of class IX and measures 75 light-years across. It features a characteristic "bar" structure across its core, visible to moderate sized telescopes. The structure consists of 11th-magnitude stars and is approximately 2.5' long and was first noted by William Herschel in 1783. At least 43 variable stars have been observed within M4. M4 is approximately 6,000 light-years away, making it the closest globular cluster to the Solar System. It has an estimated age of 12.2 billion years. More Information: https://en.wikipedia.org/wiki/Messier_4



Where to Find: Close to the bright yellow/red star Antares in the constellation Scorpius.

NGC 6541 Globular Cluster in Corona Australis

NGC 6541 is a globular cluster in the southern constellation of Corona Australis. It is estimated to be around 12 to 13 billion years old. The globular cluster was discovered by Niccolò Cacciatores at the Palermo Astronomical Observatory, Sicily, on March 19, 1826. It was independently found by James Dunlop on July 3, 1826. More Information: https://en.wikipedia.org/wiki/NGC_6541



Where to Find: Below the tail of Scorpius

NGC 6397 Ara Globular Cluster

NGC 6397 is a globular cluster in the constellation Ara. It is located about 7,800 light-years from Earth, making it one of the two nearest globular clusters to Earth (the other one being Messier 4). The cluster contains around 400,000 stars, and can be seen with the naked eye under good observing conditions. NGC 6397 is one of at least 20 globular clusters of the Milky Way Galaxy that have undergone a core collapse, meaning that the core has contracted to a very dense stellar agglomeration. More Information:

https://en.wikipedia.org/wiki/NGC_6397



Where to Find: Within the Ara constellation asterism

NGC 6231 Northern Jewel Box open cluster in Scorpius

NGC 6231 is an open cluster in the southern sky located half a degrees north of Zeta Scorpii. NGC 6231 is part of a swath of young, bluish stars in the constellation Scorpius known as the Scorpius OB1 association. This cluster is estimated to be about 2–7 million years old and is approaching the Solar System at 22 km/s. The cluster and association lie in the neighboring Sagittarius Arm of the Milky Way. More Information:

https://en.wikipedia.org/wiki/NGC_6231



Where to Find: Near the start of the curl of the Scorpius Constellation tail