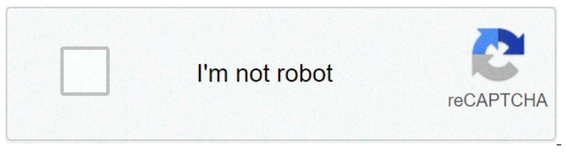

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Second brightest star in the constellation

Pronunciation: (kuh-REE-nuh) Abbreviation: Car Genitive: Carinae Right Ascension: 9 hours Declination: -60 degrees Area in Square Degrees: 494 Crosses Meridian: 9 PM, March 15 Visible Between Latitudes: 20 and -90 degrees The constellation Carina, the keel, is located in the southern hemisphere of the sky. It is visible at latitudes south of 15 degrees and is completely below the horizon for latitudes north of 39 degrees. It is a medium-sized constellation occupying an area of 494 square degrees. It ranks 34th in size among the 88 constellations in the night sky. It is bordered by the constellations Centaurus, Chamaeleon, Musca, Pictor, Puppis, Vela, and Volans. Carina was once part of a larger constellation called Argo Navis. This larger constellation represented the great ship of Jason and the Argonauts on their voyage to find the golden fleece. Argo Navis was one of the 48 constellations first listed by the Greek astronomer Ptolemy in the second century. This constellation was later divided by the French astronomer Nicolas Louis de Lacaille into three smaller parts. Carina became the Keel, Puppis the Stern, and Vela the Sails. These three smaller constellations were added to the official list of modern constellations in the early 20th century by the International Astronomical Union (IAU). Carina constellation map © Torsten Bronger CC BY-SA 3.0 The constellation Carina showing common points of interest below © Sea and Sky 1 2 3 4 5 6 7 8 9 Canopis Miaplacidus Avior Aspidiske Theta Carinae Upsilon Carinae Omega Carinae Foramen Chi Carinae "Menelaus's Helmsman" "Placid Waters" N/A "Little Shield" N/A N/A N/A (Origin Unknown) N/A Blue-White Supergiant Star Blue Subdwarf Star Binary Star System Blue Supergiant Star Blue-White Dwarf Star Double Star Blue-White Giant Star Binary Star System Blue Subgiant Star -0.74 1.68 1.86 2.21 2.76 2.97 3.29 3.30 3.60 Carina is famous as the home of the bright star Canopis. It is the brightest star in the constellation and the second brightest star in the night sky with a visual magnitude of -0.74. It is a blue-white supergiant star that is 13,600 times brighter than the Sun. It is located approximately 310 light years from Earth. The second brightest star is Miaplacidus with a magnitude of 1.68. It is a blue subdwarf star that lies 111 light years away. The third brightest star is Avior with a magnitude of 1.86. It is a binary star system located some 630 light years from our solar system. Carina contains no Messier objects but does contain a few notable deep-sky objects. The Eta Carinae Nebula is a large nebula surrounding the star Eta Carinea. It is one of the largest diffuse nebulas known. It is home to several other objects including the Mystic Mountain, the Homunculus Nebula, and the Keyhole Nebula. The Wishing Well Cluster is an open cluster of about 150 stars. Its name comes from the fact that the stars look like silver coins twinkling at the bottom of a wishing well. NGC 3603 is an open star cluster surrounded by a region of glowing red gas. NGC 2808 is a globular star cluster that contains more than a million stars. It is one of the most massive globular clusters in the Milky Way galaxy. Image of the Eta Carinae Nebula © Harel Boren / CC BY 4.0 Hubble Space Telescope image of the star Eta Carinae surrounded by the Homunculus Nebula The Mystic Mountain Nebula as seen by the Hubble Space Telescope ESO Image of the Wishing Well Cluster © European Southern Observatory / CC BY 4.0 Pronunciation: (sen-TAHR-us) Abbreviation: Cen Genitive: Centauri Right Ascension: 13 hours Declination: -50 degrees Area in Square Degrees: 1060 Crosses Meridian: 9 PM, May 20 Visible Between Latitudes: 30 and -90 degrees The constellation Centaurus, the centaur, is located in the southern hemisphere of the sky. It is visible at latitudes between 25 degrees and -90 degrees. It is a large constellation that covers an area of 1,060 square degrees. This makes it the ninth largest constellation in the night sky. It is bordered by the constellations Antlia, Carina, Circinus, Crux, Hydra, Libra, Lupus, Musca, and Vela. Centaurus is one of the 48 constellations first identified by the second century Greek astronomer Ptolemy. It represents a centaur, a half man half horse creature from Greek mythology. It is an old constellation that dates back to the ancient Babylonians. They knew it as the Bison-man. It was depicted as a four-legged bison with the head of a man. The ancient Greeks identified it as a centaur, but it is not clear exactly which centaur it represents. It may represent Chiron who was accidentally wounded by Hercules. After his death, Hercules honored him by giving him a place in the stars. Under a dark sky, the outline of the constellation does indeed resemble a centaur. It is usually depicted as a centaur sacrificing an animal which is represented by the constellation Lupus, the wolf. The constellation Centaurus showing common points of interest below © Sea and Sky Centaurus constellation map © Torsten Bronger CC BY-SA 3.0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 Rigel Kentaurus Hadar Menkent Muhlifain Epsilon Centauri Eta Centauri Alnair Ma Wei Alhakim Ke Kwan Nu Centauri Mu Centauri Pi Centauri Sigma Centauri "Foot of the Centaur" "The Settled Land" "Shoulder of the Centaur" "Two Things" N/A N/A "Bright Body Star" "Third Star of Horse's Tail" "The Wise One" "Imperial Guards" N/A N/A N/A N/A Triple Star System Blue Giant Star Orange Giant Star Double Blue Subdwarf Star Blue-White Giant Star Blue-White Dwarf Star Binary Star System Blue-White Subgiant Star Blue-White Subdwarf Star Blue Subdwarf Star Blue-White Subgiant Star Blue-White Subgiant Star Binary Star System Blue-White Dwarf Star -0.01 0.61 2.06 2.20 2.30 2.35 2.55 2.57 2.73 3.14 3.41 3.42 3.90 3.91 Centaurus contains several bright stars. It is probably most famous for the star Alpha Centauri, which is the closest star to our solar system. It also contains two of the ten brightest stars in the sky. The brightest star in the constellation is Rigel Kentaurus, also known as Alpha Centauri. It has a visual magnitude of -0.01 and is the third brightest star in the night sky. It is the closest star system to Earth at a distance of only 4.37 light years. The second brightest star in the constellation is Hadar. With a magnitude of 0.61, it is the tenth brightest star in the sky. It is a blue giant star located approximately 349 light years from Earth. Menkent is the third brightest star with a magnitude of 2.06. It is an orange giant star that lies about 60 light years away. Centaurus contains no Messier objects but does have a few notable deep-sky objects. Centaurus A is the fifth brightest galaxy in the sky and one of the closest radio galaxies to our solar system. It is a lenticular or spiral galaxy seen edge-on. Its dark dust lanes are easily visible. Omega Centauri is a gigantic globular star cluster containing over 10 million stars. It is the brightest globular cluster as seen from Earth and one of the few globular star clusters bright enough to be seen with the naked eye. The Blue Planetary, also known as The Southerner, is the brightest planetary nebula in the southern sky. It can easily be seen in a small telescope. NGC 4945 is a spiral galaxy seen edge-on from Earth that can be seen in small telescopes. Centaurus contains a number of other dim galaxies, but these can only be seen with a large telescope. ESO image of spiral galaxy Centaurus A © ESO/SPECULOOS Team/E. Jehin / CC BY 4.0 Image of the Blue Planetary Nebula in Centaurus © ESA/Hubble and NASA / CC BY 3.0 ESO image of Globular star cluster Omega Centauri © European Southern Observatory / CC BY 4.0 ESO image spiral galaxy NGC 4945 © European Southern Observatory / CC BY 4.0 Have you ever wondered which are the brightest stars in our night sky and what makes these stars so bright? We have compiled a list just for you – read on to find out which stars are the shiniest and learn the science behind star luminosity. What Determines a Star's Brightness? First of all, we want to understand what makes some stars brighter than others. You may have thought, obviously the closer they are the brighter they are, and you are completely correct. However, there are other factors that contribute to our shiny little friend's visibility in the night sky. These include a star's age and size. Larger stars have shorter life spans and therefore burn out much faster, whereas smaller stars, such as our Sun, can live for several billion years until they peacefully die out, pass through a planetary nebula stage to become white dwarfs and lastly turn into brown dwarfs. So if a star is super bright, it must be in its peak life cycle and, of course, relatively close to our Earth. So who takes the first place in our starry night sky? Which is the Brightest Star in Our Night Sky? The shiniest star in the sky at night is a smaller star most commonly known as Sirius or the Dog Star, however, its official name is Alpha Canis Majoris for it is located in the constellation of Canis Major (literally meaning "Big Dog" in Latin). The name Sirius is derived from the Greek word Seirios which translates to "glowing" or "scorching" – a name that rightfully suits this star since it is the most luminous of them all. Only the full moon, a few planets and perhaps the International Space Station shine brighter than this star in the night sky. Sirius is located at a magnitude of -1.46 and is located – Right ascension: 6 hours 45 minutes 8.9 seconds, Declination: -16 degrees 42 minutes 58 seconds. You can easily spot the Dog Star in the Northern Hemisphere's winter sky thanks to it being comparatively close to Earth as opposed to other stars (8.6 light-years away) and due to its mass which, according to NASA, is twice that of our Sun's mass. You can also see Sirius from the Southern Hemisphere because it forms part of the celestial equator. Did You Know Sirius Has a Twin? Yes, Sirius is part of what we call a Binary star system which consists of Sirius A (our beloved shiny star) and its sibling Sirius B. Scientists first discovered that Sirius had a twin in 1862 because this star is 10,000 times dimmer than Sirius A and it cannot be seen at all by the naked eye – even in the darkest sites. Sirius B is in its final life stages and it won't be long before it turns into a brown dwarf. But enough about Sirius, what are the other brightest stars in our night sky? Now, let's see which are the shiniest stars in our beautiful starry night sky. 1. Sirius A (Alpha Canis Majoris) Our number one star on the list. As mentioned before, this star is part of the constellation Canis Major with an apparent magnitude of -1.5 and is 8.6 light-years away from Earth. You can spot this star from anywhere on our planet. 2. Canopus (Alpha Carinae) This star is named after the mythological character Canopus who was a navigator for Menelaus, king of Sparta. It's part of the constellation Carina and located at a magnitude of -0.72, 309. It is 310 light-years away from our Sun and can be seen from the Northern Hemisphere. 3. Rigil Kentaurus (Alpha Centauri) At only 4.36 light-years from Earth, this star is part of the closest star system to our Solar System and consists of three stars with Rigil Kentaurus being the brightest. It is part of the constellation Centaurus with an apparent magnitude of -0.29. It is best spotted from the Southern Hemisphere. 4. Arcturus (Alpha Bootis) The brightest star in the northern celestial hemisphere. This star is part of the constellation Bootes with an apparent magnitude of -0.04 and is about 37 light-years away from Earth. Its name originates from Greek and means "Bear Watcher" or "Guardian of the Bear" due it's proximity to the Ursa Major (Big Bear). Fun fact, this star is actually a red giant. 5. Vega (Alpha Lyrae) The name Vega comes from Arabic and literally means falling vulture. This is the most luminous star in the Lyra constellation with an apparent magnitude of +0.03, and it is relatively close, only 25.5 light-years away from Earth. Vega is visible from the Northern Hemisphere. 6. Capella (Alpha Aurigae) Cappella or the Goat Star is the shiniest star in the Auriga constellation with an apparent magnitude of +0.08, 42 light-years away from Earth. This star is also best spotted from the Northern Hemisphere. 7. Rigel (Beta Orionis) The brightest star in the constellation Orion, Rigel (from Arabic – 'the left leg of the giant') has an apparent magnitude of +0.18 and although it is 860 light-years away from Earth, it shines so bright because it's a Blue giant star. It can be seen from the Southern Hemisphere. 8. Procyon (Alpha Canis Minoris) Procyon, just like Sirius, is also part of a binary star system with its twin being a dwarf. It is located in the Canis Minor constellation with an apparent magnitude of +0.34 and at a distance of 11.46 light-years away from Earth. This star is visible from the Northern Hemisphere. 9. Achernar (Alpha Eridani) Its name Achernar is derived from Arabic and means "The End of the River". This shiny celestial being is located in the Eridanus constellation with an apparent magnitude of +0.445 at a distance of 114 light-years away from Earth. You can spot it from the Southern Hemisphere. 10. Betelgeuse (Alpha Orionis) And lastly, we have Betelgeuse which is the second most luminous star in the constellation Orion with an apparent magnitude of +0.42 and at a distance of 640 light-years away from Earth. The name Betelgeuse also derives from Arabic and means either "the armpit of Orion" or "the hand of Orion". This star is visible from the Northern Hemisphere. Adopting Your Own Shiny Star So there you have it, the top ten brightest stars in our sky. Now you may be wondering if you can adopt one of the brightest stars yourself. Just head over to Cosmonova where you can choose from the brightest stars, stars in your zodiac or even adopt binary stars so that you and your special loved one can have matching stars that are always magnetically connected to each other. And if you wish to commemorate a special day and time that was significant to you or your loved one, check out our custom made star maps at belowthestars.com Project Nightflight, a Vienna-based astrophotography group, caught Canopus over the island of La Palma in Spain's Canary Islands. Read more about this image. Sirius is the brightest star in the sky. It's visible to all of us across the globe. The second-brightest star, Canopus, is more challenging to spot because it's located so far south in the sky. For those in the Southern Hemisphere, no problem. Canopus is visible most of the year high in the sky. But those in the far-northern part of the Northern Hemisphere might never get a peek. If you want to see Canopus in the Northern Hemisphere, head to southern latitudes in winter time, as many snowbirds do, and look south for a bright star close to the horizon. If you are far enough south on Earth's globe, you can see the sky's second-brightest star, Canopus, below the sky's brightest star, Sirius. Photo taken by Jun Lao of the Philippines on December 29, 2005. Look for Canopus below Sirius, the sky's brightest star. Are you situated on Earth to be able to see Canopus? Will you see it? It depends on how far south you are, and what time of year you're looking. Canopus never rises above the horizon for locations north of about 37 degrees north latitude. In the United States, that line runs from roughly Richmond, Virginia; westward to Bowling Green, Kentucky; through Trinidad, Colorado; and onward to San Jose, California – just south of San Francisco. You must be south of those places to see Canopus. If you're in the southern U.S., you'll have no trouble finding Canopus on winter evenings. Just look to the south, below brilliant Sirius. February evenings are a perfect time to look, when Canopus is at its highest in the sky around 9 p.m. Those who can see it from the Northern Hemisphere sometimes ask What is that bright star below Sirius? Fair question, because – from latitudes like those of the United States – Canopus appears in the southern sky almost directly south of Sirius, the brightest star of the nighttime sky. When Sirius is at its highest point to the south, Canopus is about 36 degrees below it. At the end of December, Canopus stands at its highest point to the south after midnight. In January, it reaches that point at about 10 p.m. By the beginning of March, Canopus is due south at about 8 p.m., although the exact timing on all of these dates depends on the observer's geographic location. For observers in the Southern Hemisphere it's an entirely different story. From latitudes south of the equator, both Canopus and Sirius – the sky's two brightest stars – appear high in the sky, and they often appear together. They are like twin beacons crossing the heavens. The sight of them is enough to make a northern observer envy the southern skies! Artist's concept of Arrakis, the third planet of Canopus in Frank Herbert's science fiction novel "Dune." Image via Wikipedia's Stars and Planetary Systems in Fiction. Canopus in science fiction. In Frank Herbert's 1965 novel Dune and other novels in his Dune universe, the fictional planet Arrakis – a vast desert world, home to sandworms and Bedouin-like humans called the Fremen – is the third planet from a real star in our night sky. That star is Canopus – the second-brightest star visible in Earth's sky – in what we know as the constellation Carina. In Herbert's novel, the desert planet Arrakis is the only source of "spice," the most important and valuable substance in the Dune universe. It's possible, according to Wikipedia (which references the famous book Star Names: Their Lore and Meaning by Richard Allen), that Herbert was influenced in his choice of this star as the primary for Arrakis by a common etymological derivation of the name Canopus: … as a Latinization (through Greek Kanobos) from the Coptic Kahi Nub ("Golden Earth"), which refers to how Canopus would have appeared over the southern desert horizon in ancient Egypt, reddened by atmospheric absorption. Indeed, from much of the classical world in ancient times, Canopus would have appeared low in the sky, when it was visible at all. And so, yes, its bright light would be reddened due to looking at it through a greater thickness of atmosphere in the direction toward the horizon, just as our sun or moon seen low in the sky looks redder than usual. Golden Earth indeed. By the way, although Arrakis is fictional, Canopus is not only very real but also much hotter and larger than our sun. See the Science section below. Drawing from Urania's Mirror, 1825, showing Carina as part of the ancient ship Argo Navis. Via constellationofwords.com. History and mythology of Canopus. Canopus is also called Alpha Carinae, the brightest star in the constellation Carina the Keel. This constellation used to be considered part of Argo Navis, the ship of Jason and his famed Argonauts, as seen in our sky. Canopus originally marked a keel or rudder of this ancient celestial ship. Alas, the great Argo Navis constellation no longer exists. Modern imaginations see it as broken into three parts: the Keel (Carina, of which Canopus is part), sails (Vela) and the poop deck (Puppis). For those far enough south to see it, Canopus was a star of great importance from ancient times to modern times as a primary navigational star. This is surely due to its brightness. The origin of the name Canopus is subject to question. By some accounts it is the name of a ship's captain from the Trojan War. Another theory is that it is from ancient Egyptian meaning Golden Earth, a possible reference to the star's appearance as seen through atmospheric haze near the horizon from Egyptian latitudes. Canopus is a supergiant of spectral type F and appears essentially white to the naked eye. Image via Fred Espenak/astropixels.com. Canopus seen from the International Space Station (ISS). A comparison of the size of our sun to that of Canopus. Image via dunenovels.com. Science of Canopus. According to data obtained by the Hipparcos Space Astrometry Mission, Canopus is about 313 light-years away. Spectroscopically, it is an F0 type star, making it significantly hotter than our sun (roughly 13,600 degrees F or 7,500 C at its surface, compared to about 10,000 degrees F or 5,500-6,000 C for the sun). Canopus also has a luminosity class rating of II, which makes it a "bright giant" star much larger than the sun. (Some classifications make it a type Ia "supergiant.") If they were placed side by side, it would take about 65 suns to fit across Canopus. Although Canopus appears significantly less bright than Sirius, it is really much brighter, blazing with the brilliance of 14,000 suns! With non-visible forms of light energy factored in, it surpasses the sun by more than 15,000 times. Although its exact age is unknown, Canopus' great mass dictates that this star must be near the end of its lifetime and is likely is a few million to a few tens of millions of years old. Compared to our sedate middle-aged five-billion-year-old sun, Canopus has lived in the stellar fast lane and is destined to die young. Canopus's position is RA: 6h 23m 57s, dec: -52° 41′ 45″ How can you be sure which star is Sirius? Orion's Belt – three stars in a short, straight row (see top of this photo) – point to it. Here, you see Sirius, and, below it, the sky's second-brightest star,Canopus. Photo via Ramalingam Rajaraman. Enjoying EarthSky so far? Sign up for our free daily newsletter today! Bottom line: Canopus is the second brightest star as seen from Earth. To see Canopus, you must either be in the Southern Hemisphere or in the southern latitudes of the Northern Hemisphere looking south during winter. Deborah Byrd created the EarthSky radio series in 1991 and founded EarthSky.org in 1994. Today, she serves as Editor-in-Chief of this website. She has won a galaxy of awards from the broadcasting and science communities, including having an asteroid named 3505 Byrd in her honor. A science communicator and educator since 1976, Byrd believes in science as a force for good in the world and a vital tool for the 21st century. "Being an EarthSky editor is like hosting a big global party for cool nature-lovers," she says. Larry Sessions has written many favorite posts in EarthSky's Tonight area. He's a former planetarium director in Little Rock, Fort Worth and Denver and an adjunct faculty member at Metropolitan State University of Denver. He's a longtime member of NASA's Solar System Ambassadors program. His articles have appeared in numerous publications including Space.com, Sky & Telescope, Astronomy and Rolling Stone. His small book on world star lore, Constellations, was published by Running Press.