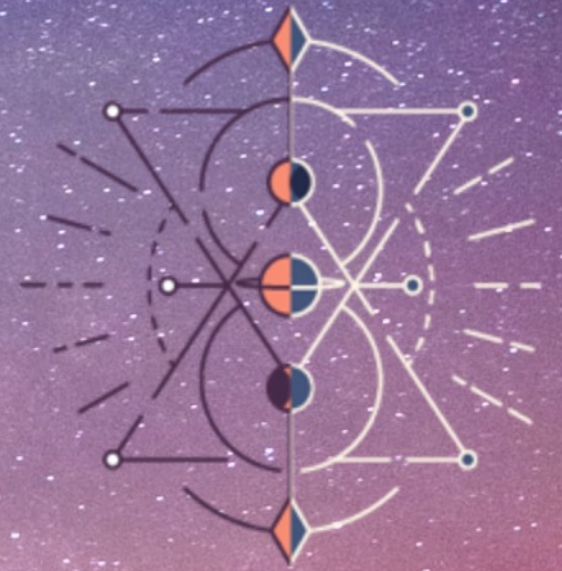


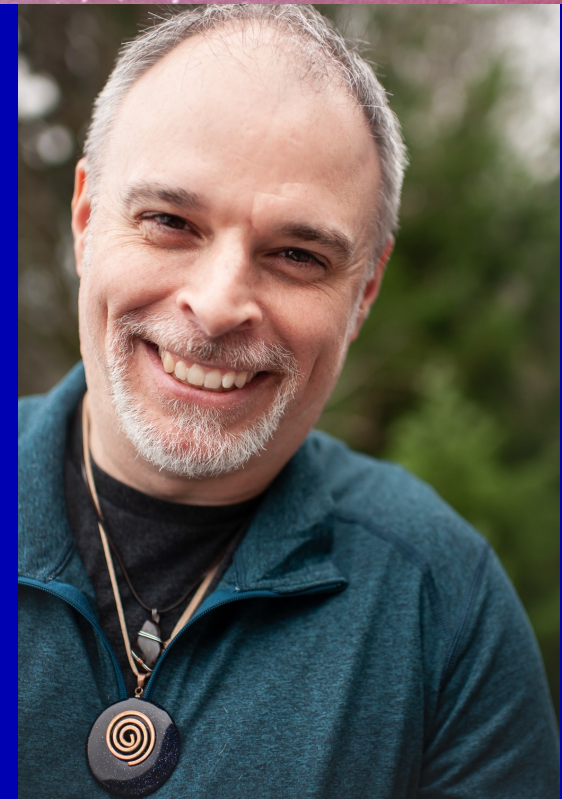
My Star Alchemy

Bringing you the Magic and Wisdom of the Stars



Exploring Stellar Gateways:
Featuring the Stars of
Our Ancestral Origins and
Our Divine Destiny

With Cayelin K Castell & Erik M Roth



The Geomantic Gateways: Two Stellar Triangles On the Milky Way Band

Southern Triangle:

Gateway of Ancestral Origins

Winter Triangle

X Asterism of Egypt

Northern Triangle:

Gateway of Divine Destiny

Navigator's Triangle

Summer Triangle



Why are we focusing on these Gateways?

- Awareness of our celestial origins and potential destiny allows us to be more conscious in engaging our past and future in useful and evolutionary ways
- These gateways are metaphysical, spiritual and astral portals that anyone can connect with
- They are easy to spot in the night skies across the planet
- They are universally accessible
- The gateways play a vital role in the journey for humanity, Earth and our Solar System
- Deepening our relationship with the shamanic and alchemical sky work and embodying it in our lives is an additional bonus



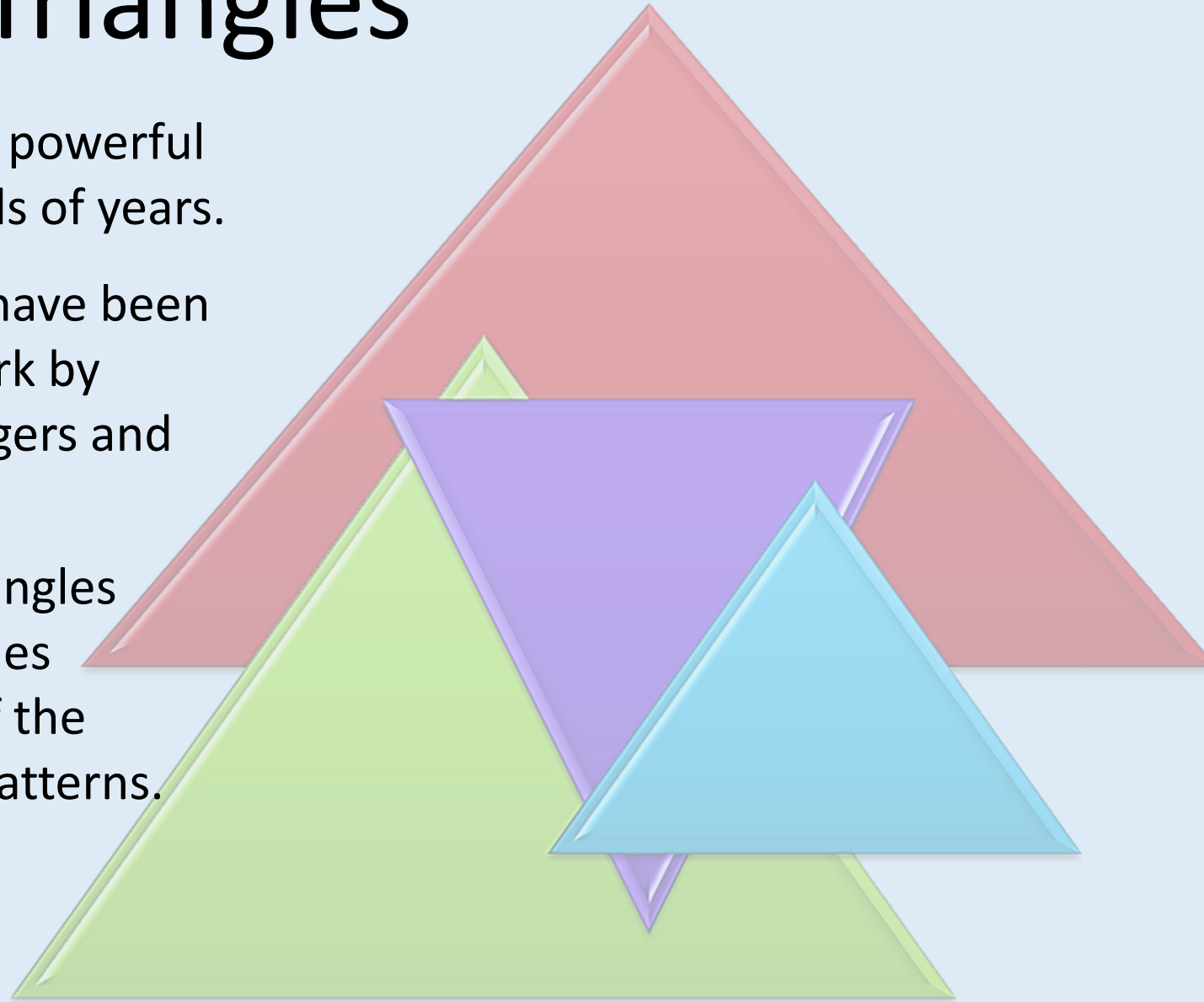
The Magic of Star Triangles

The triangular geometric form has been a powerful influence on humanity for many thousands of years.

The triangle consists of three points that have been used throughout history in alchemical work by ancient philosophers, star priests, astrologers and alchemists.

In the sky, there are many natural star triangles that have magical and alchemical properties for humanity. This course explores two of the more easily recognizable and accessible patterns.

The number “3” has been equally powerful in humanity’s spiritual and magical practices. Even the major religions work with that number.



One billion years ago, a cluster of stars formed in our galaxy we know as the Milky Band.

Since then gravity has stretched that cluster of stars out from a blob into a long stellar stream.

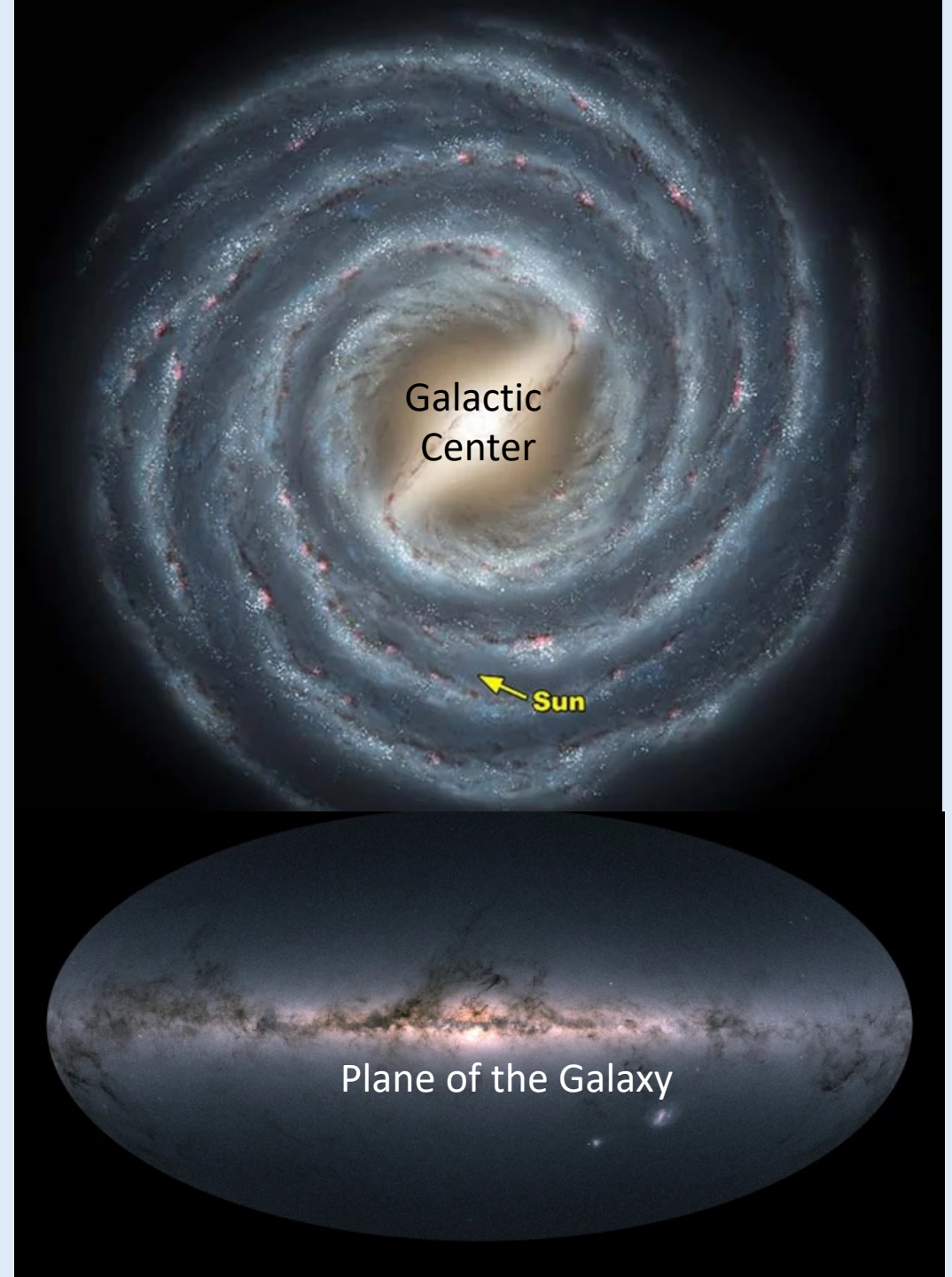
Right now, the stars of the Milky Way Band are passing relatively close to Earth, just about 330 light-years away.

Scientists feel this river of stars could help determine the mass of the entire Milky Way Galaxy.

Astronomers have seen these stars before, mixed in with lots of stars all around them. But until now, they didn't realize the stars were part of a group.

The river of stars is 1,300 light-years long and 160 light-years wide, winding through the Milky Way's vast, dense star field.

3D-mapping data from Gaia, a European Space Agency spacecraft, showed that the stars in the stream moved together at roughly the same speed and in the same direction.



The Milky Way Galaxy

The Center of the Galaxy is located between the Scorpion and the Archer with Ophiuchus near by and the Summer Triangle with Cygnus toward the east.

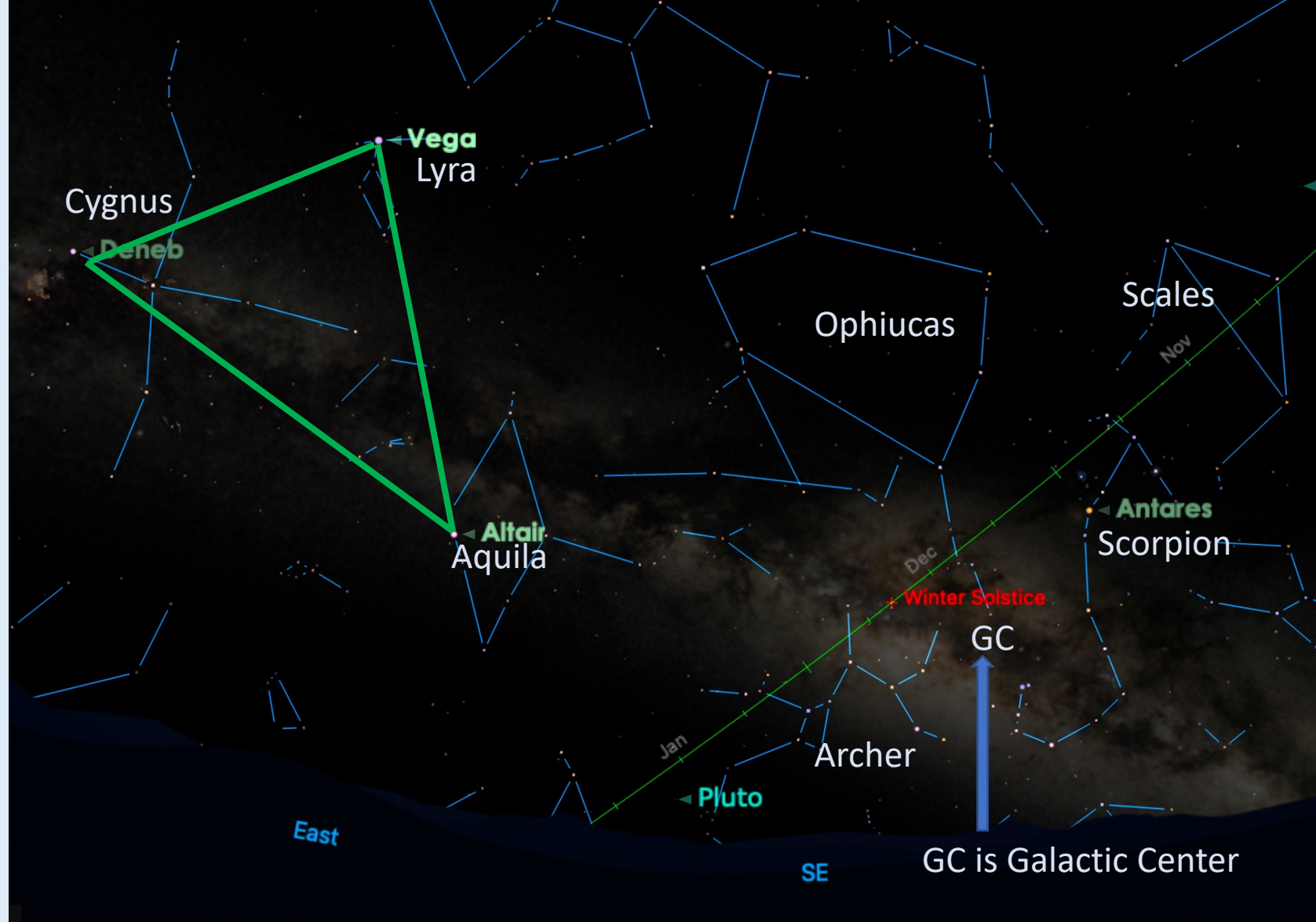
This part of the Milky Way is the brightest and easiest to see.

In our Modern Times light pollution dims this mind-altering experience unless you can get under dark skies.

The ancient Egyptian culture saw it as the work of the Goddess Isis, who spread an abundance of life-giving wheat across the sky.

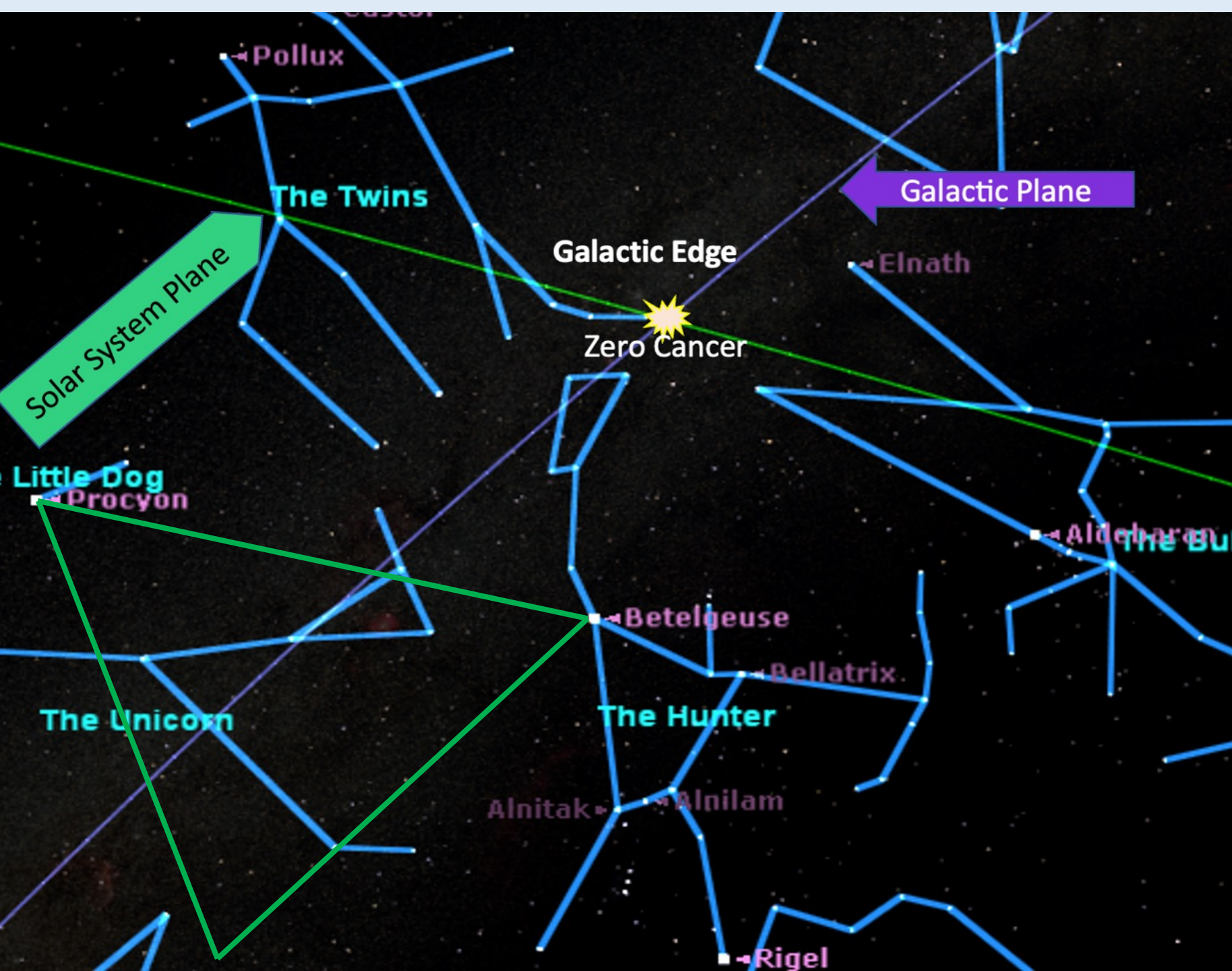
The Incas saw this band of stars as a stream of gold dust.

Ancient cultures often saw it as a road or path, or river of stars.



The Maori, of New Zealand saw it as a celestial canoe

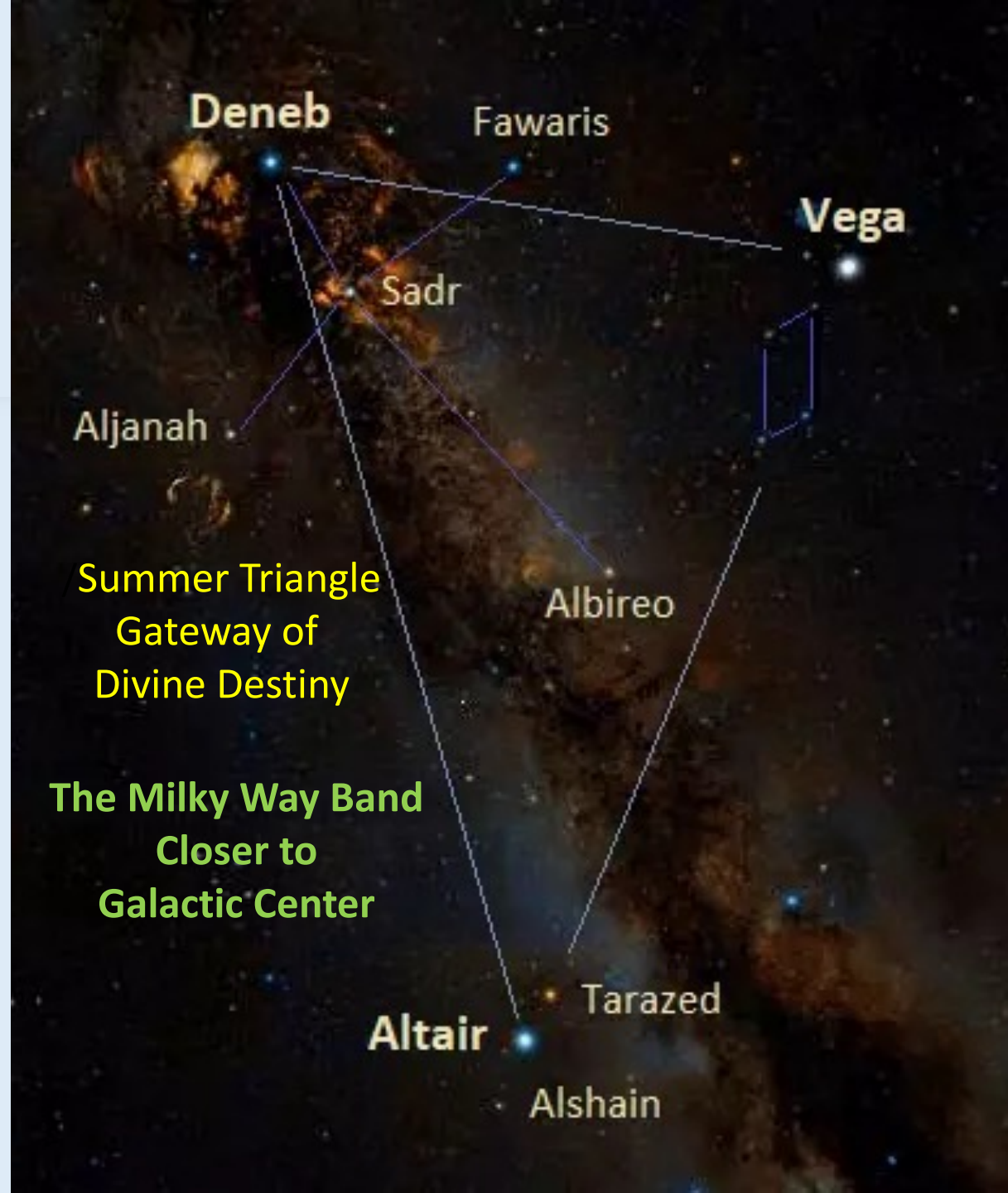
The Iroquois described it as the path to eternal life after death, the “Road of Souls.”

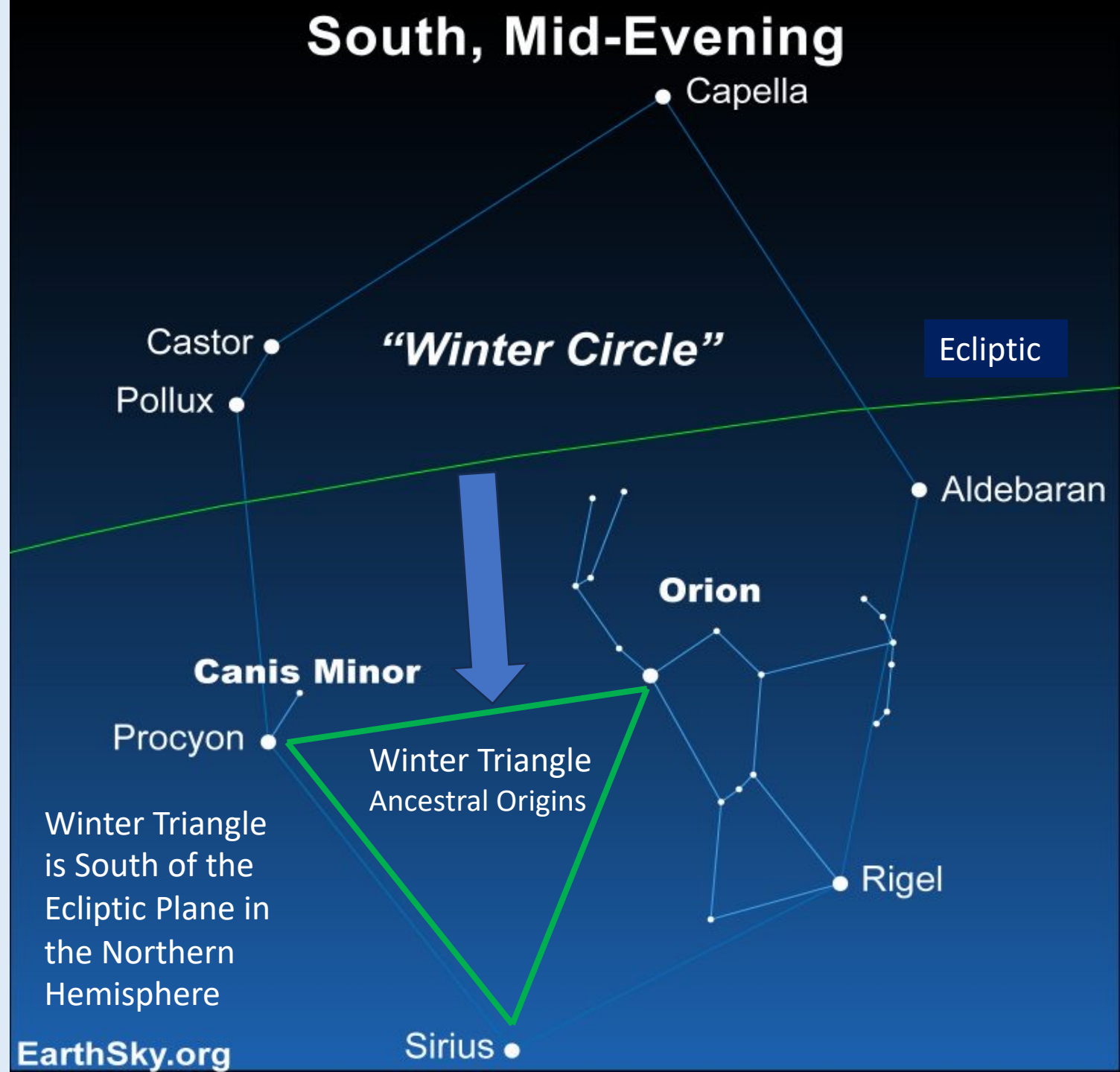
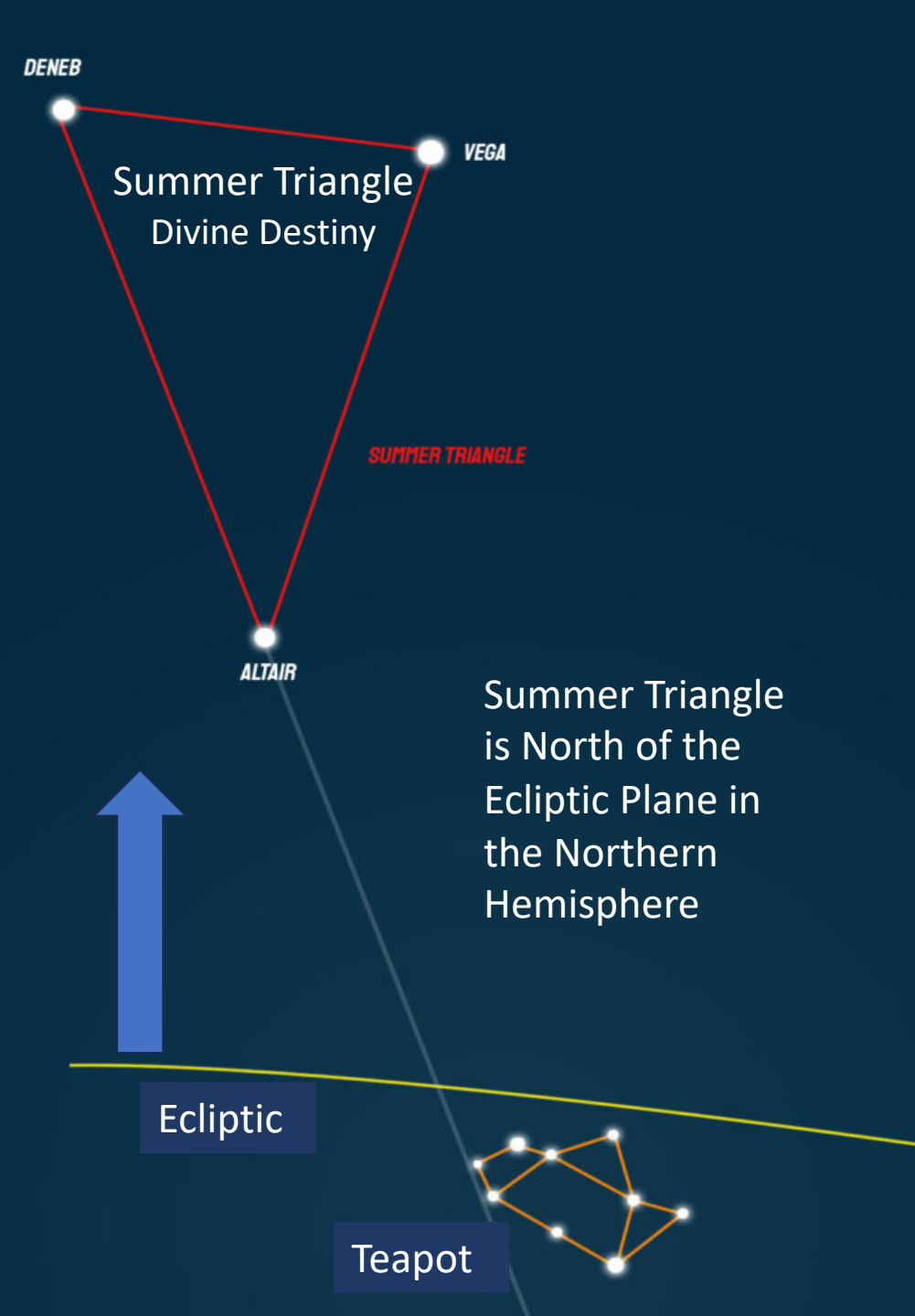


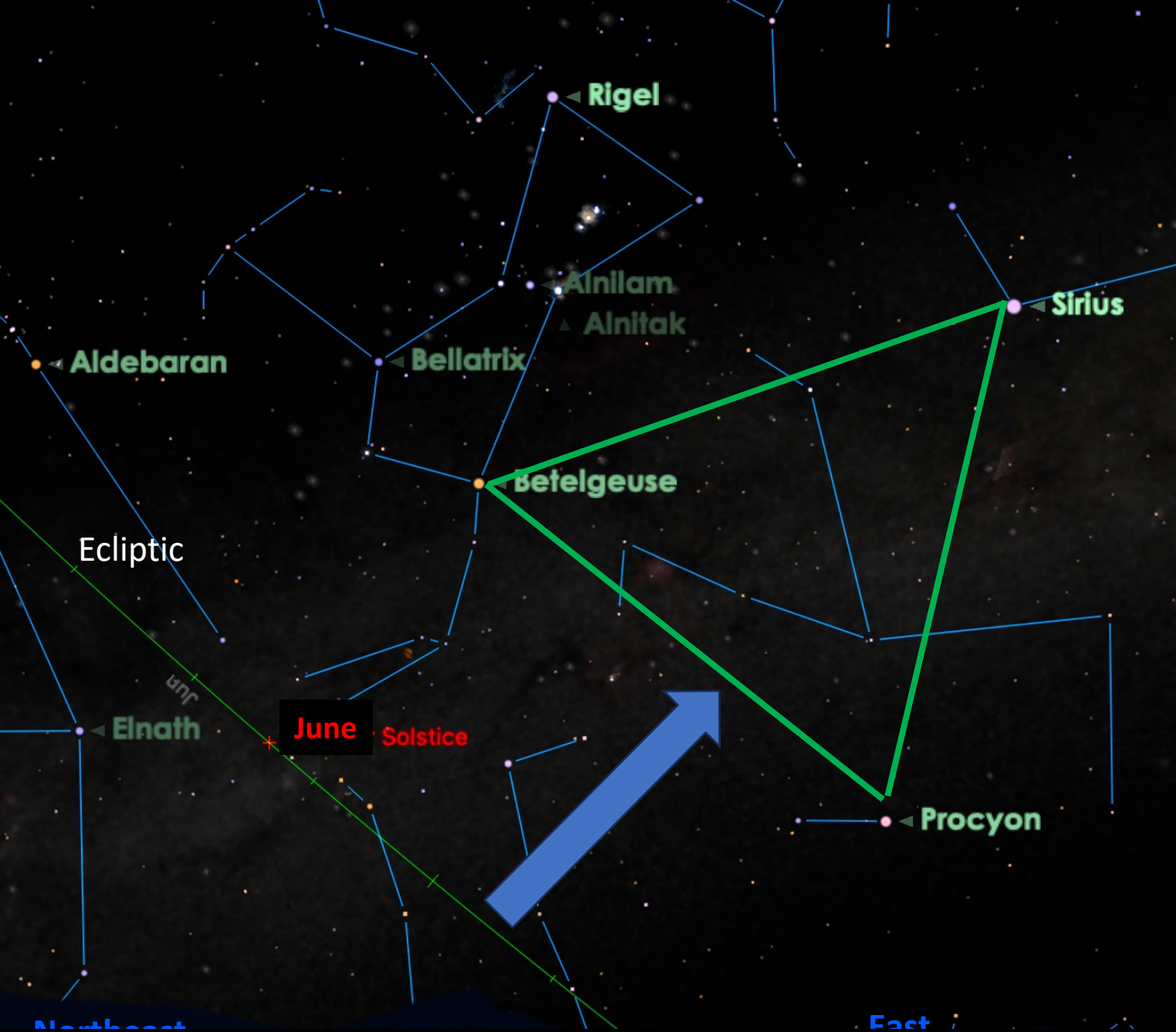
The Galactic Cross at the Galactic Edge where the June Solstice Sun Rises between the Twins and the Horns of the Bull

The Milky Way is fainter at the edge than near the center but we have Orion, the hunter reaching up to the Galactic Cross!

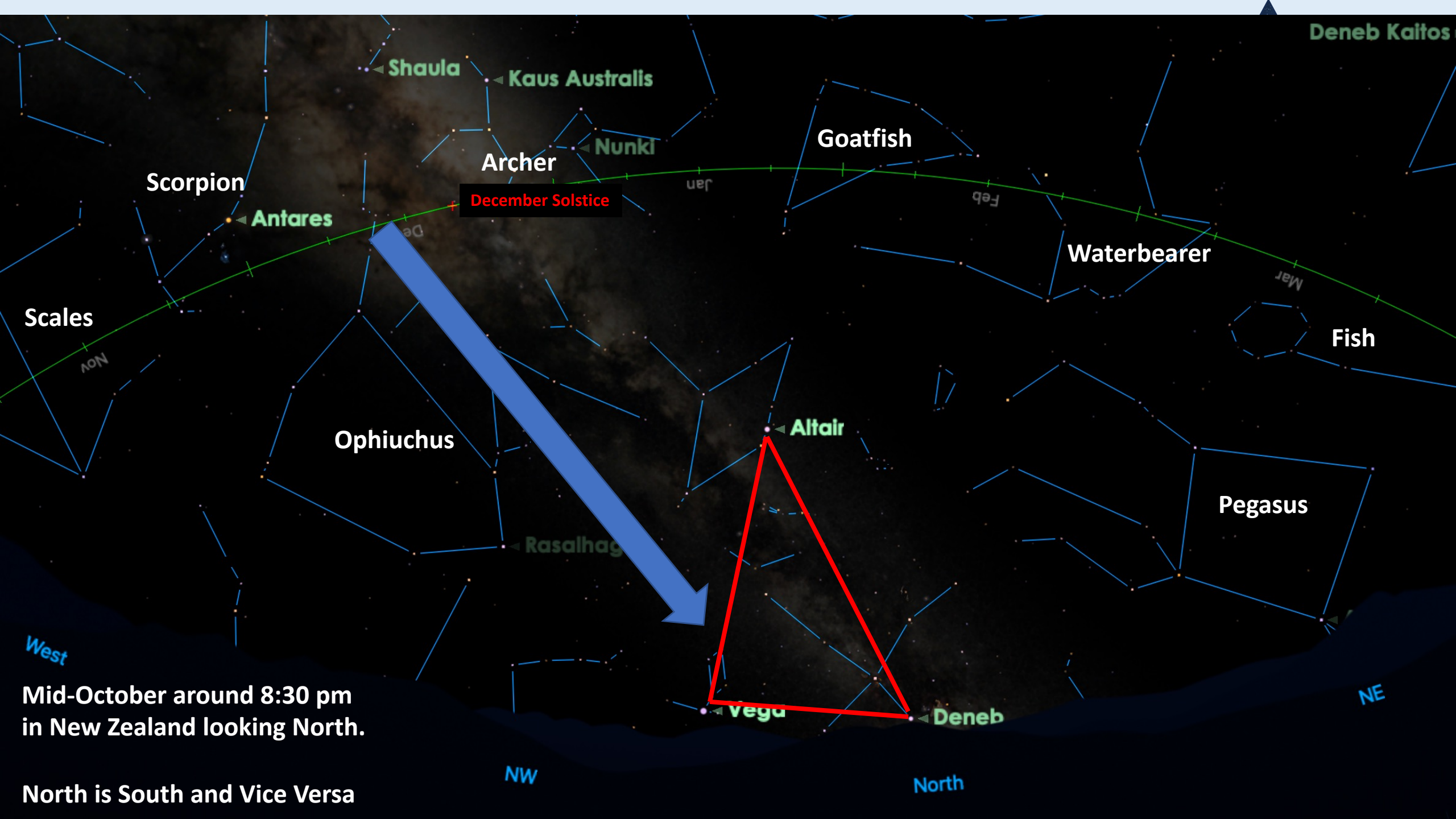
Both Triangles Feature the Milky Way Band







Southern Hemisphere Triangular Gateways as seen in October

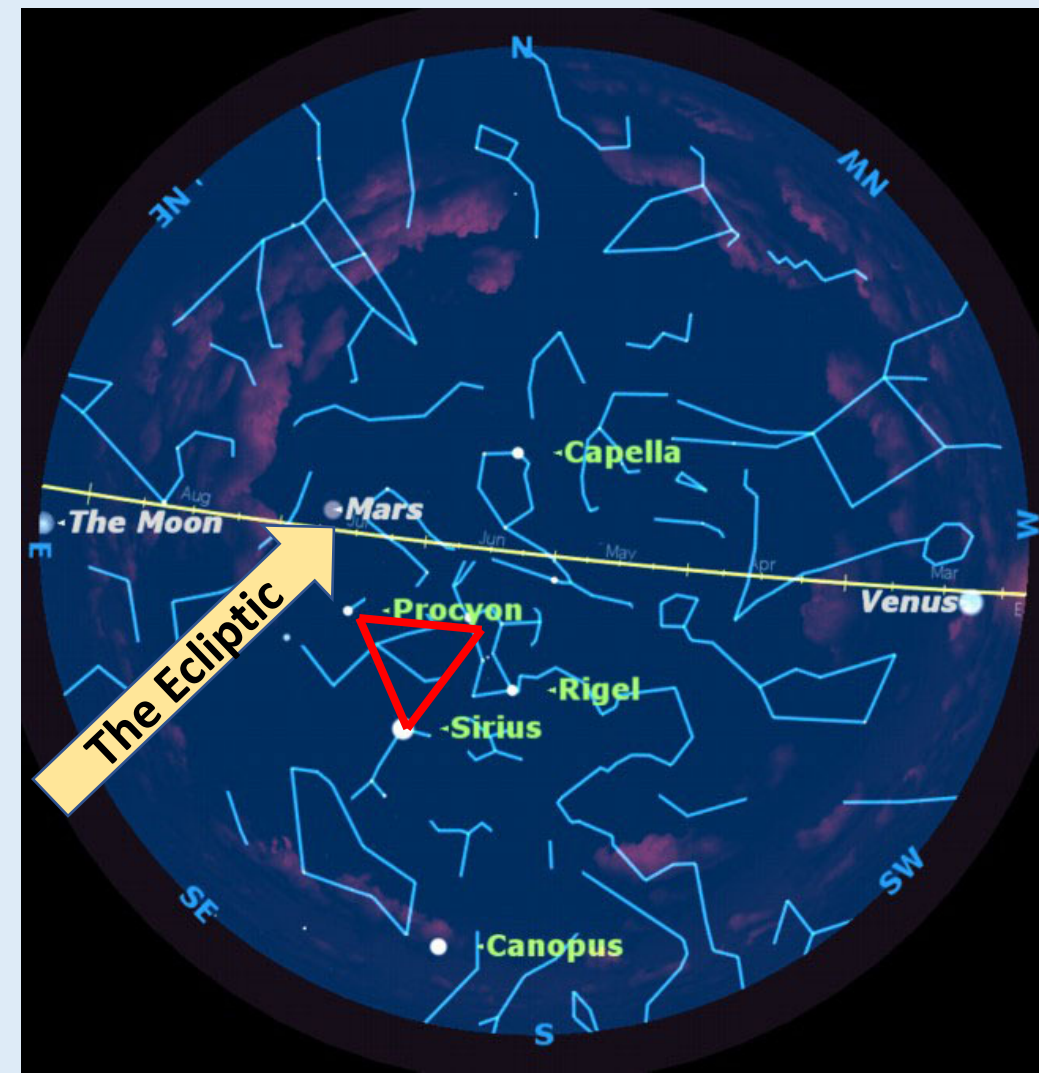
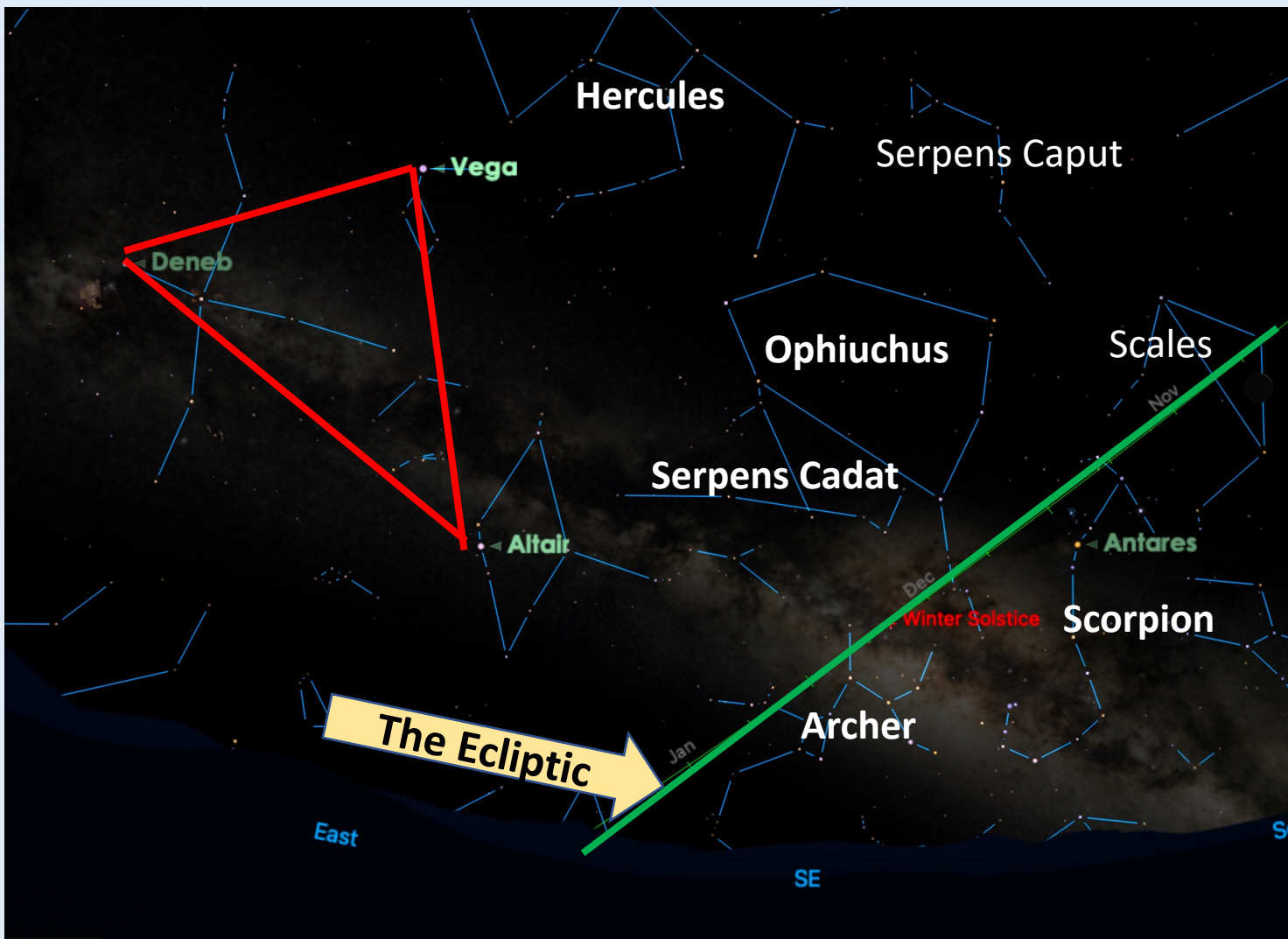
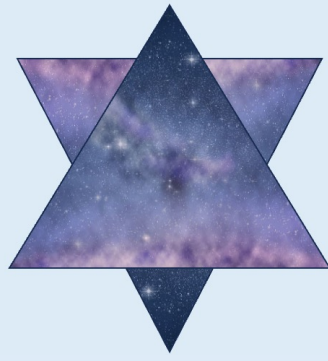


Mid-October around 8:30 pm
in New Zealand looking North.

North is South and Vice Versa

Above and Below

The Stellar Triangles show up above and below the ecliptic also known as the plane of our Solar System, where the Sun holds sway across the sky. The Ecliptic is the path in the sky where all the major planets are found including Earth.



Above and Below

The Gateway of Divine Destiny (triangle consisting of Vega, Altair and Deneb) is well ABOVE the ecliptic in the Northern Hemisphere or North of the Ecliptic Plane.

The Gateway of Ancestral Origins (triangle consisting of Sirius, Procyon and Betelgeuse) is well BELOW the ecliptic in the Northern Hemisphere or South of the Ecliptic Plane.

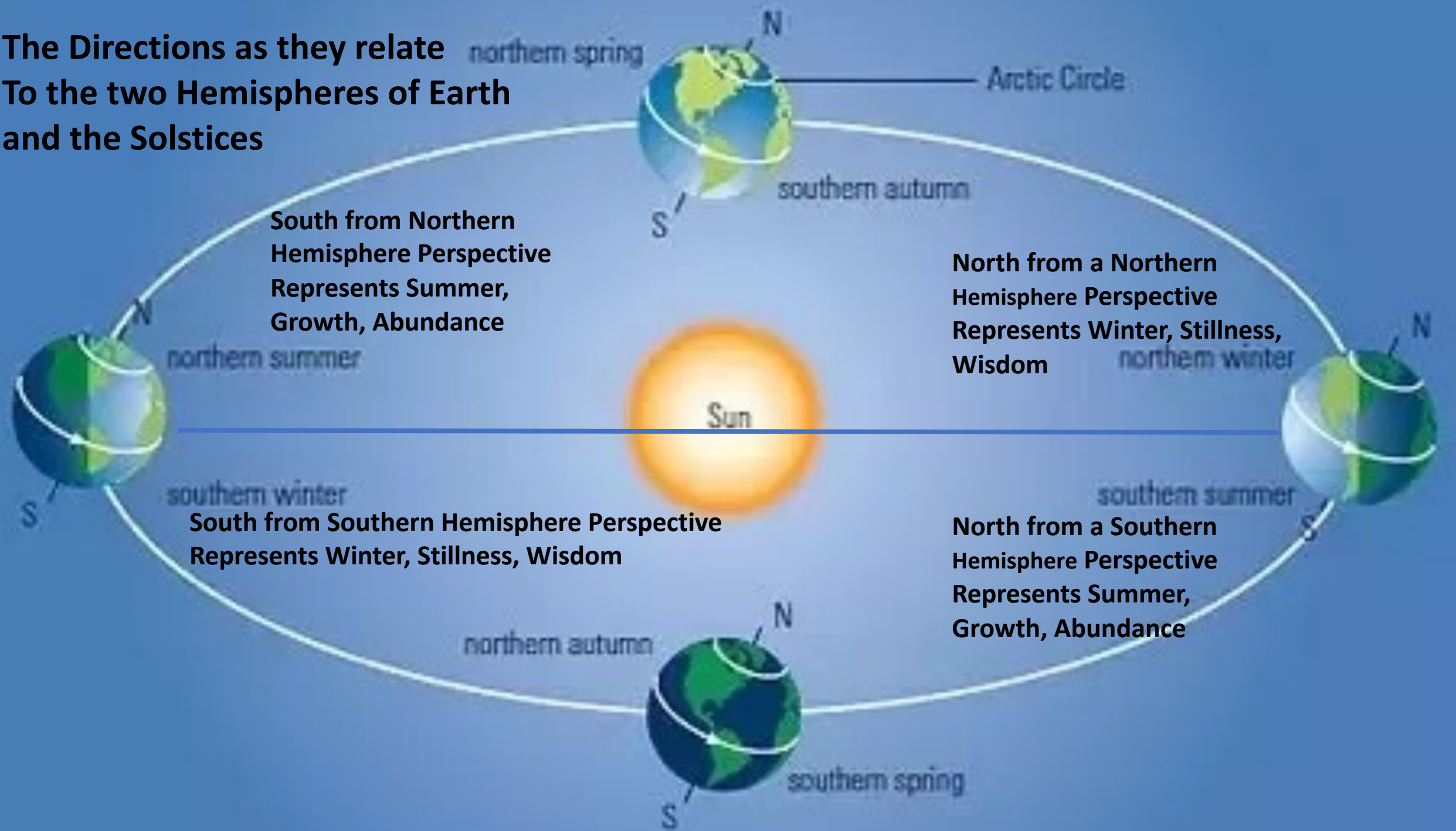
From a Northern Hemisphere perspective, we can imagine the star patterns North (above) of the ecliptic connect us with our evolving consciousness and future path.

All that is south of the ecliptic connects us with our origins.

All that is along the ecliptic is part of our middle world path or vision quest path while we are planet Earth.



**The Directions as they relate
To the two Hemispheres of Earth
and the Solstices**



Gateway of Ancestral Origins

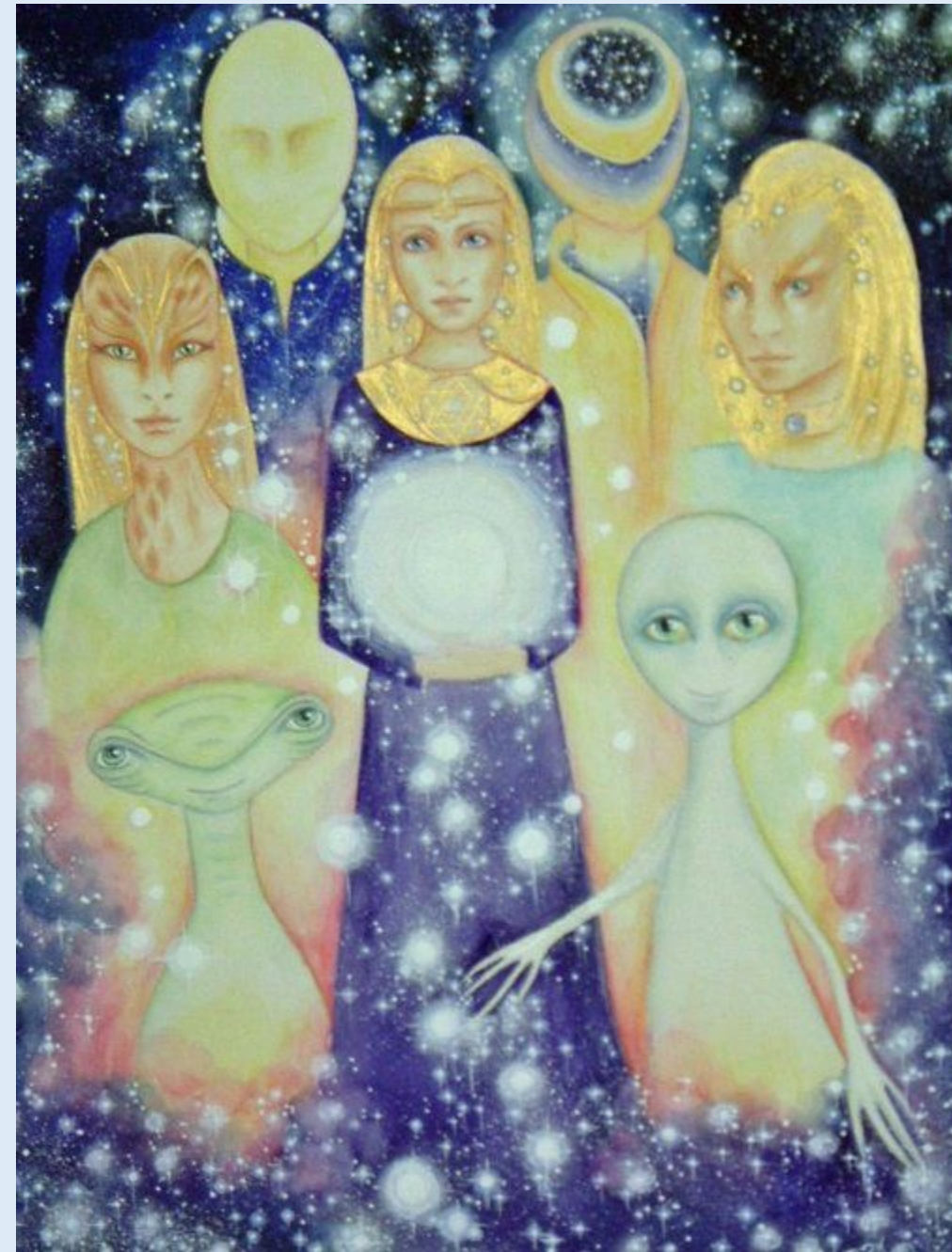
The Winter Triangle is below (or south of) the ecliptic (Path of the Sun) and is dominant in the Northern Hemisphere winter season - high in the southern sky.

In the Southern Hemisphere, the Winter Triangle or Great Southern Triangle is powerfully visible in their summer sky or opposite season. Sirius, Procyon and Betelgeuse form a nearly equilateral triangle.

Metaphysically, the Southern Triangle can be seen as the Gateway of Ancestral Origins. This is due to the brightest star in the sky, Sirius, located near the point where our Solar System is traveling away from.

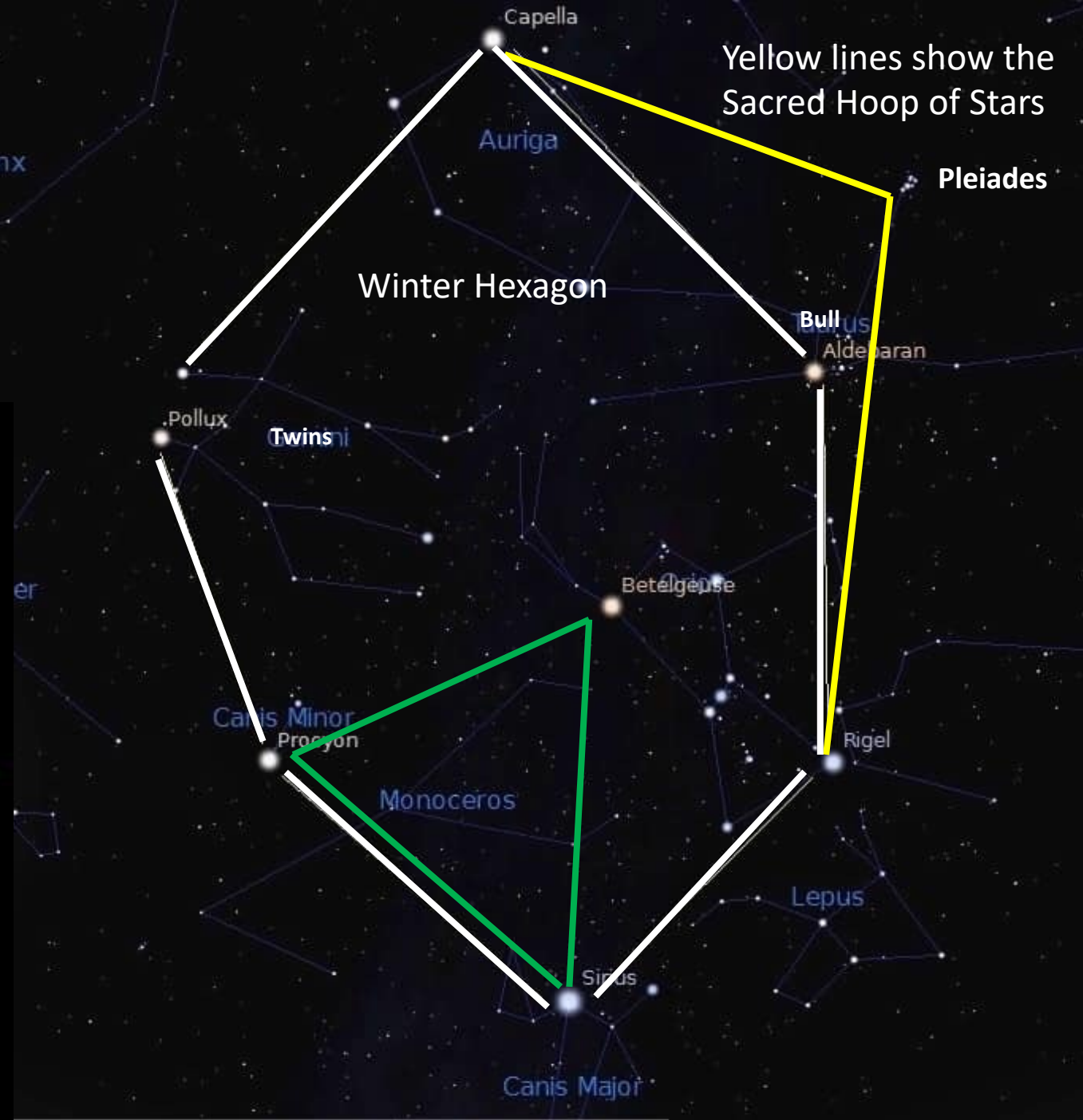
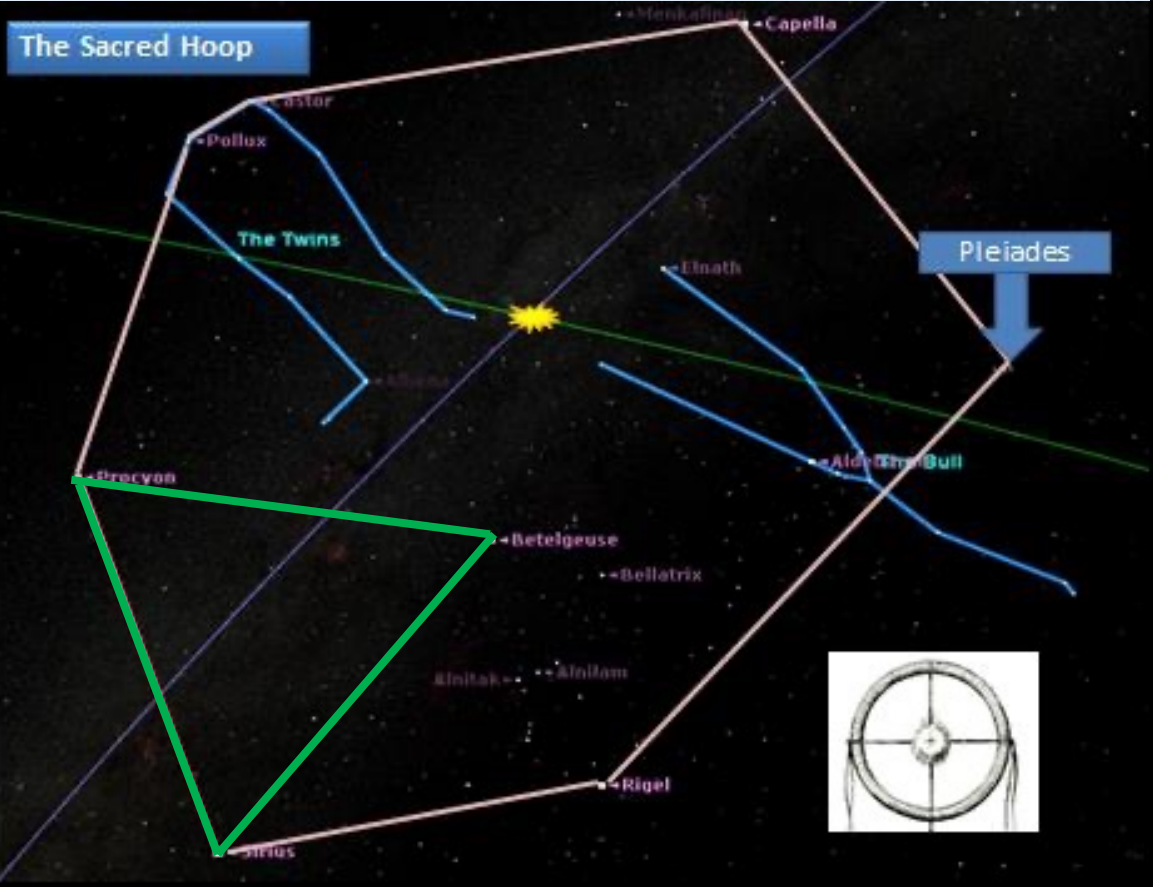
Sirius (14°24' Cancer) and Vega (15°38' Capricorn) are about a degree from being exactly opposite each other by longitude or astrological degree as well as each well above (Vega) and below (Sirius) the plane of the Solar System.

Both are 2 of the brightest stars in the sky (after the Sun) and all the stars in these geomantic shapes or asterisms have deep mythologies associated with them (especially Sirius).



Winter Triangle a.k.a. Heaven's Gate Or the Great Southern Triangle

This asterism is in the Winter Hexagon (as it is called by astronomers) and what Native Americans (especially the Lakota/Dakota) call the Sacred Hoop of Stars.



Sirius

There is also a relationship between magical Sirius and the mythic bird, Phoenix.

The story is that for centuries or millennia, the Phoenix flies west to build a funeral pyre at the temple of Heliopolis in Egypt, then is consumed by the fires.

Phoenix is then re-birthed from the fire's ashes, where it flies east to repeat the cycle.

This points to a relationship between Sirius and the Sun and the 1,461 Sothic Cycles or Egyptian years.



In Mali, West Africa, lives the Dogon tribe.

The Dogon are believed to be of Egyptian decent and their astronomical lore goes back thousands.

According to their traditions, the star Sirius has a companion star Sirius B invisible to the human eye with a 50 year elliptical orbit around the visible Sirius A.

Sirius B wasn't photographed until 1970.

According to Dogon oral traditions, a race of people from the Sirius system - the Nommos - visited Earth thousands of years ago.

The Nommos resembled mermen and mermaids and appear in Babylonian, Accadian, and Sumerian myths.

The Egyptian Goddess Isis is sometimes depicted as a mermaid.

The Nommos are from the Sirius Star system and landed on Earth in an "ark" that made a spinning decent to the ground with great noise and wind.

It was the Nommos that gave the Dogon the knowledge about Sirius B.



The Egyptian "X"

The star Sirius was seen as a star connected with Isis/Sopdet and at one time with Anubis, the underworld god as well.

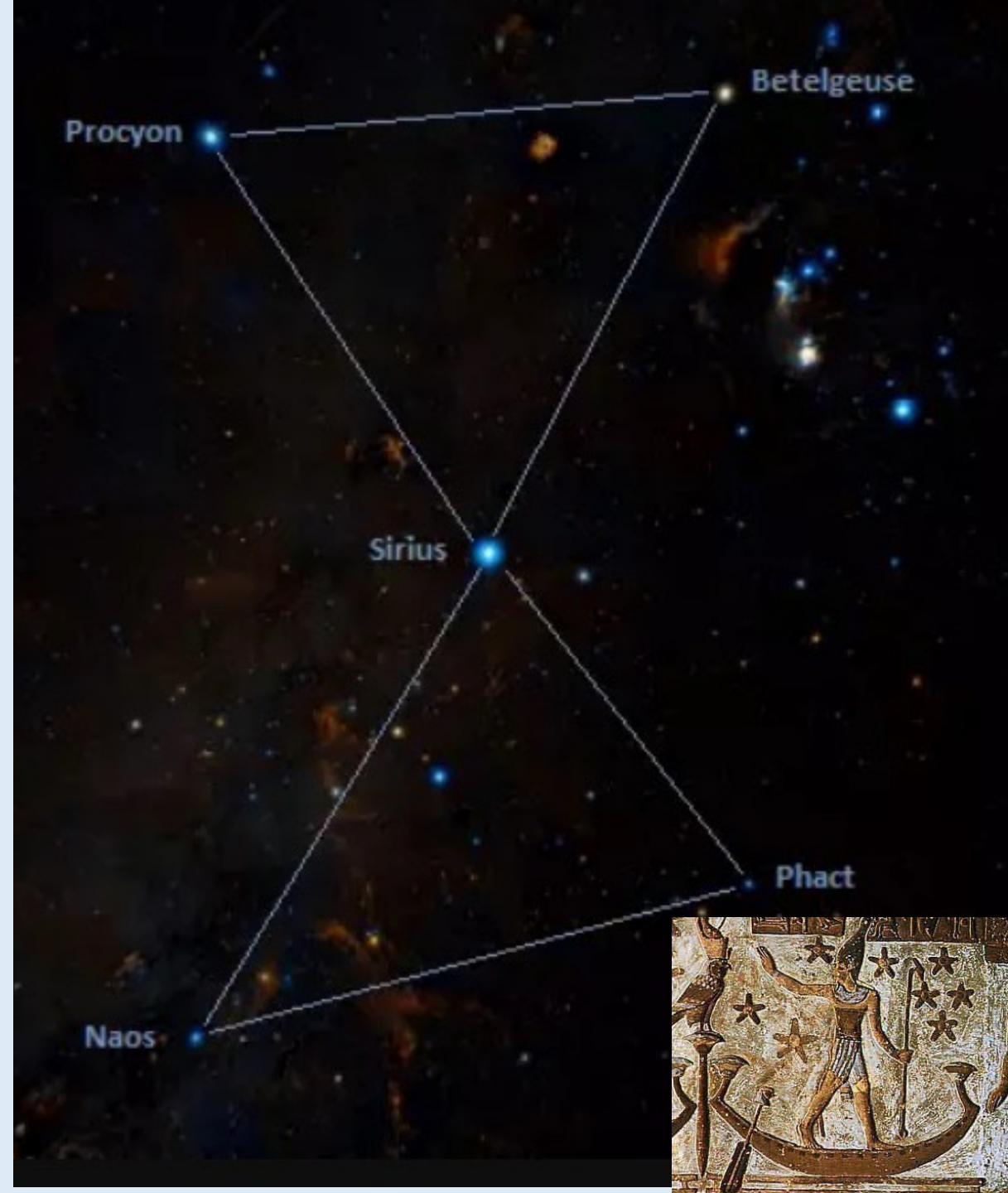
Sirius was part of an ancient triangular constellation called "Spdt" (translated into "triangle").

In the greater asterism of the "X" of the two triangles, this has deep connection with the ancient story of Osiris, Isis, Set and Horus.

Osiris was killed by Set and Isis brought him back.
Horus, son of Osiris challenged Set and defeated him, avenging his father.

The lower triangle connects Sirius to the Egyptian constellation of the "Ferryboat".

The top triangle was part of Isis and the lower triangle with Anubis. Both the feminine and masculine are symbolized here.



Gateway of Destiny

The visibility of these starry portals depends upon location and the time of year.

In the Northern Hemisphere, the Summer Triangle appears in the northern constellations not far from the Polaris our current pole star.

Vega, Altair and Deneb, are all connected to "bird" constellations recalling the bird tribes to our awareness .

Best visibility is July to September high above in the early to mid-evening skies. Southern Hemisphere best visibility is Jan to March.

Metaphysically, this is the Gateway of Destiny due to Vega's proximity to the apex where the Solar System is traveling toward.



**"IT'S NOT IN THE STARS TO HOLD
OUR DESTINY BUT IN OURSELVES."**

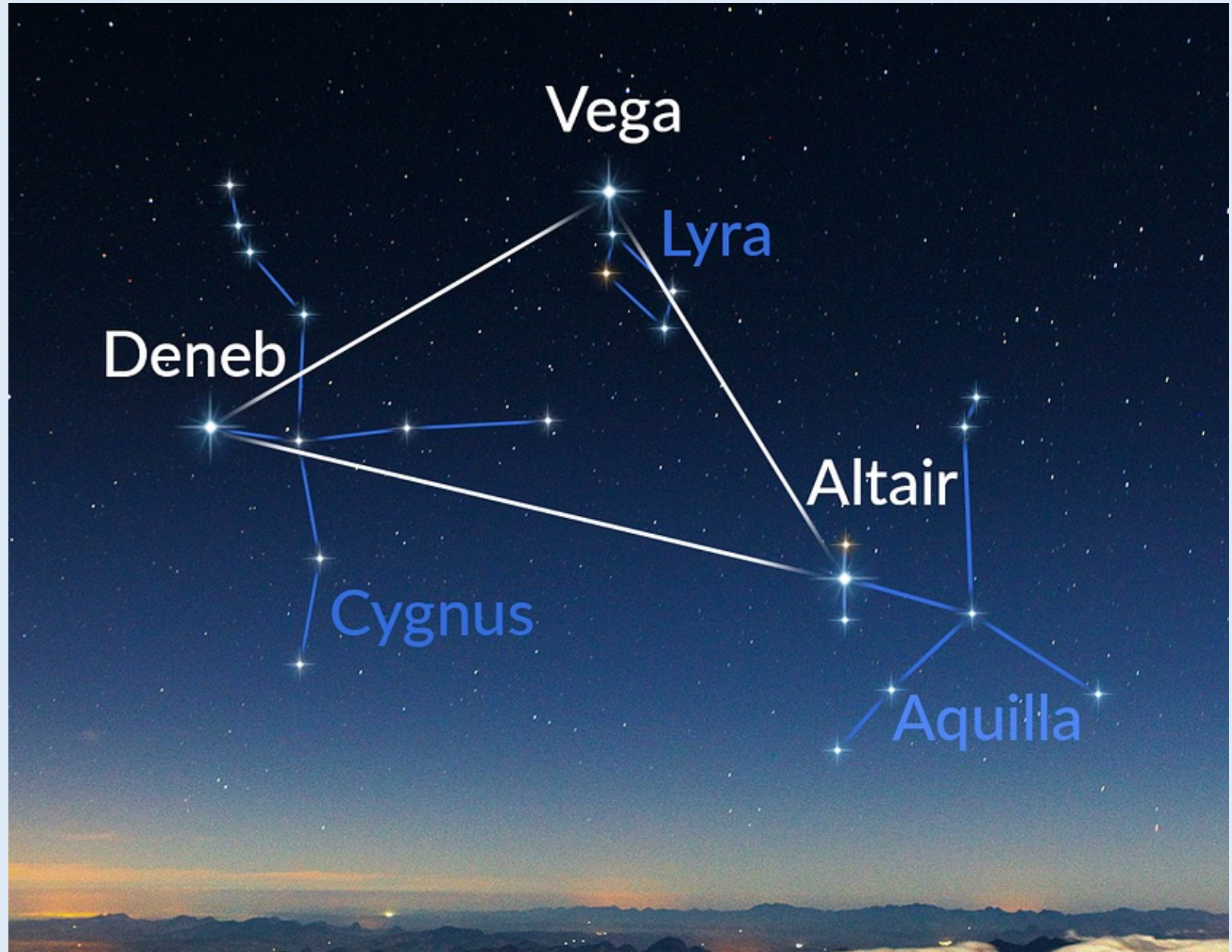
- WILLIAM SHAKESPEARE -

**Being Aware of these Star Mysteries
helps us too consciously
choose our Destiny**

This stellar triangle was originally referred to as **the Navigator's Triangle**.

British astronomer Sir Patrick Moore and American author H.A. Rey popularized the term Summer Triangle in the 1950's as a Northern Hemisphere point of view.

These stars are relatively bright and easy to locate.

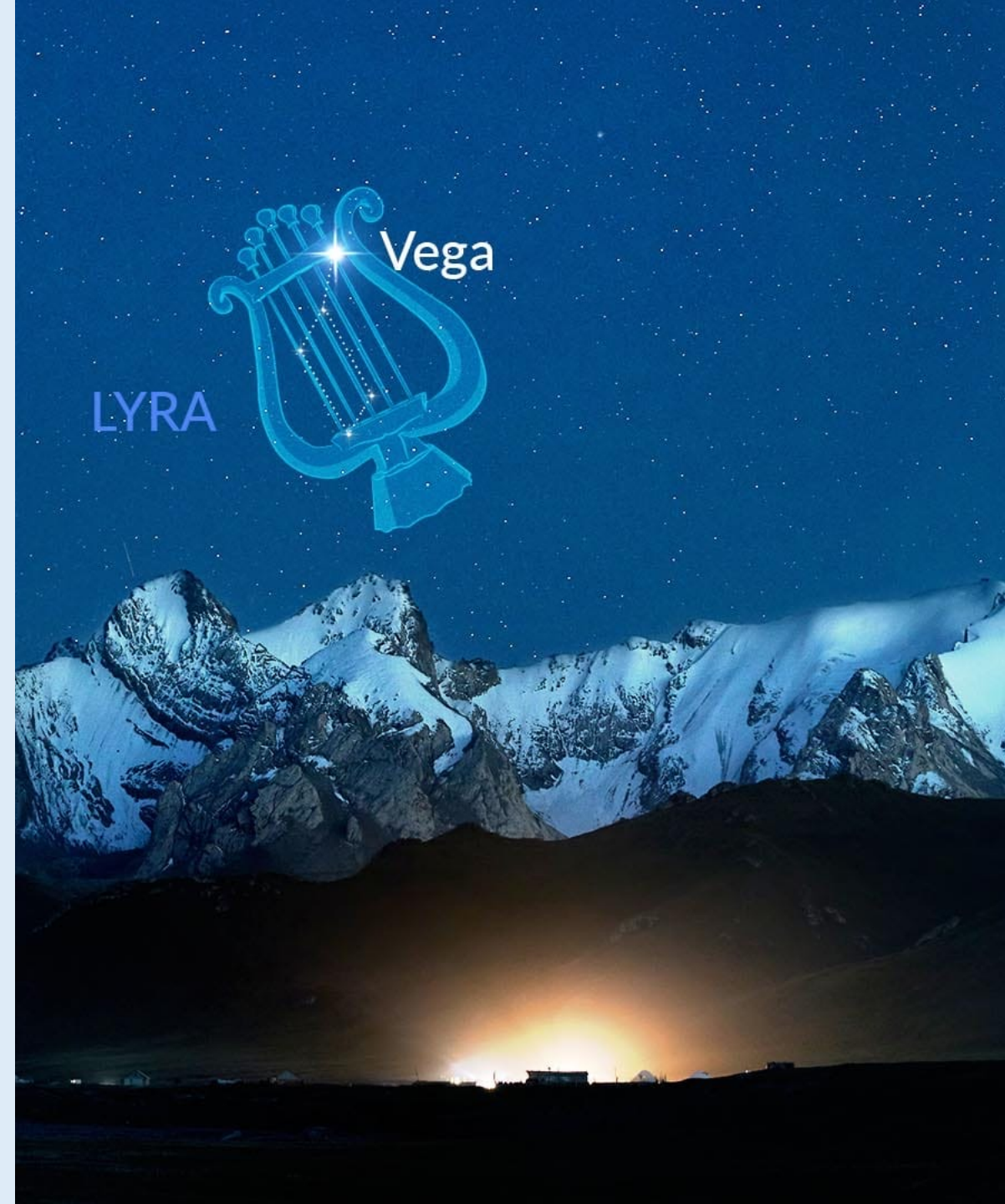


Vega

Vega (and its constellation) is also known as a vulture or other bird diving or falling from ancient Egypt and Mesopotamia.

Agrippa refers to Vega as a “Falling Vulture”.

Assuming his knowledge of the Behenian stars comes from Hermes, then the avian imagery of Vega and the constellation its part of goes back many thousands of years.





The reunion of *The Weaver Girl and the Cowherd* on the bridge of Magpies.
Artwork in the Long Corridor of the Summer Palace in Beijing.

*Ancient Chinese and Japanese culture were inspired by the star Vega. Each have a story centered about Vega in relationship with Altair (aka the Weaver Girl and the Cowherd) with references to the Sky King. In that time, the Japanese called Vega **Orihime** and celebrate a festival in July / August called Tanabata. It had a “movable” date due to its origin being on a lunisolar calendar (held on the 7th day of the 7th lunar month).*

The story of the **Weaver Girl and the Cowherd** resonates with the Mesopotamian saga story of Dumuzi and Inanna.

Vega was the Pole Star about 13,000 Years ago.

Due to precession Polaris is the current Pole Star in the Northern Hemisphere.

In about 11,500 years from now Vega will once again be the Pole Star and also the brightest star in the whole circle of successive pole-stars, only $4\frac{1}{2}^\circ$ from the exact point, as it was about 14,300 years ago.

In 1880 it was $51^\circ 20'$ distant.

Professor Lewis Boss and Herr Stumpe place Vega near the Apex of the Sun's Way.

<https://www.constellationsofwords.com/vega/>



Solar Apex and Antapex

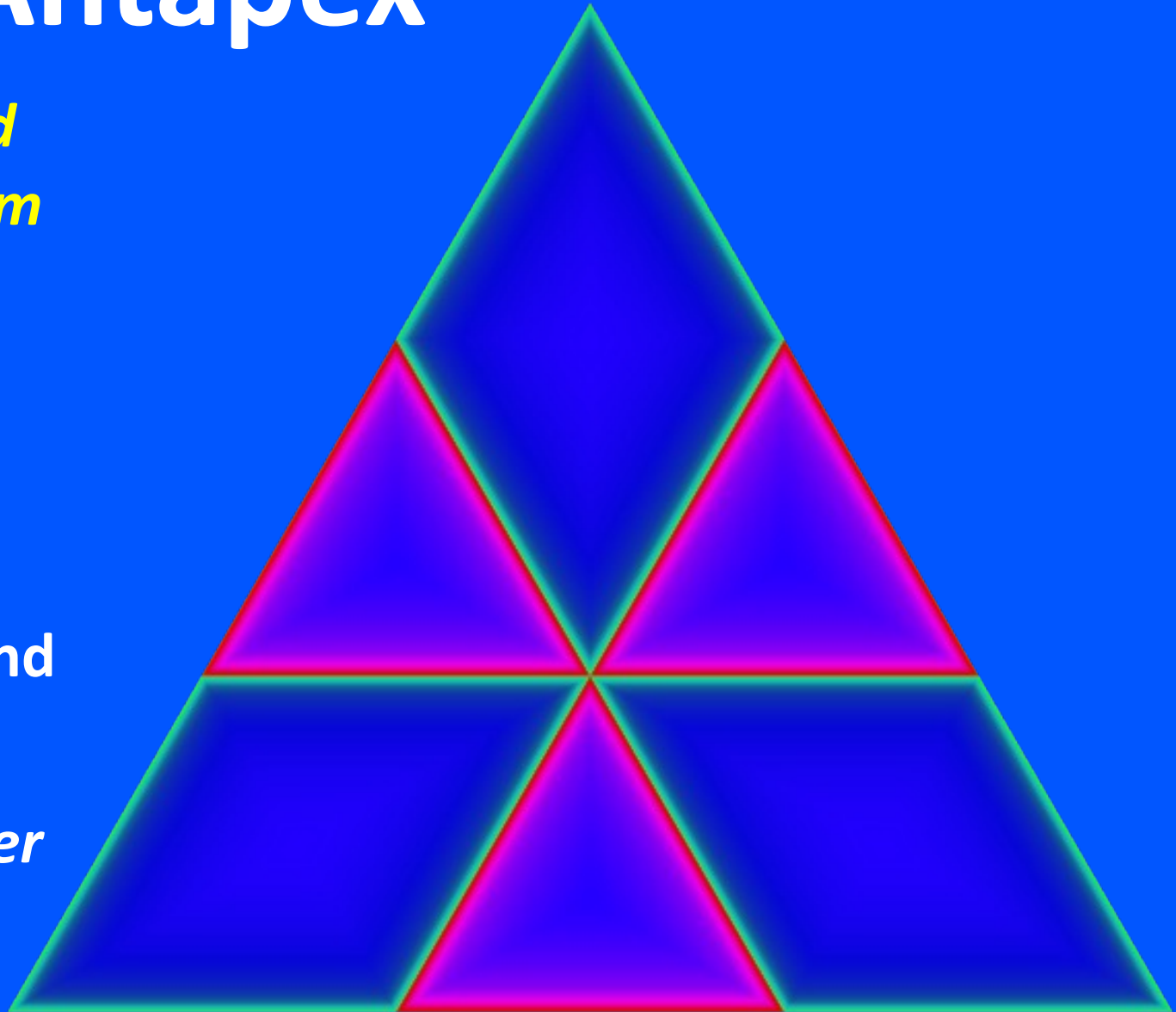
Solar Apex = Sun's Direction Toward

Solar Antapex = Sun's Direction From

Currently, **Vega** is located in the circumpolar constellation of Lyra at 15° 36' Capricorn and roughly represents the Solar Apex.

Sirius is located at 14° 21' Cancer and is near the Solar Antapex.

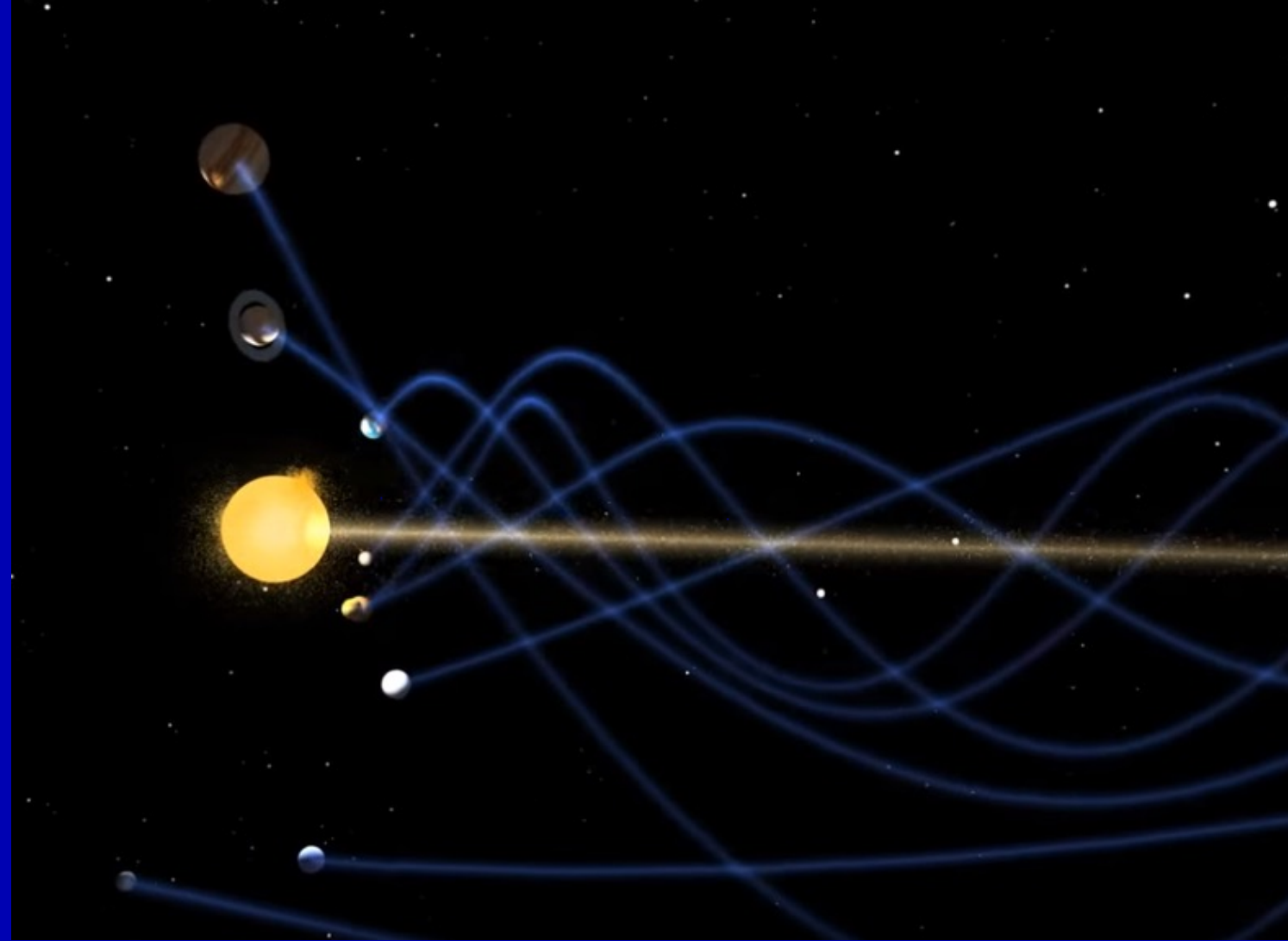
Thus, each triangle is linked to either our Ancestral Origins through the Winter Triangle or Divine Destiny through the Summer Triangle



Traveling at about 140 miles per second or 225 km/sec, our Sun takes about 230 million years to complete one circuit around our galaxy.

The amount of time it takes for our Sun to orbit around the center of the Milky Way Galaxy has been referred to as a Cosmic Year or 225 million years.

The orbit of the Sun is currently away from the Star Sirius (Solar Antapex) and toward the Star Vega (Solar Apex).



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This has been a presentation
of My Star Alchemy

With Cayelin K Castell & Erik M Roth

Sign up for the online course at
mystaralchemy.com



Canis Major is a constellation in the southern sky. Its name means “the greater dog” in Latin. Canis Major represents the bigger dog following Orion, the hunter in Greek mythology. The dog is often depicted pursuing a hare, represented by the constellation Lepus. The smaller dog is represented by the neighboring constellation Canis Minor.

Both dog constellations are among the 48 Greek constellations, first catalogued by Claudius Ptolemy of Alexandria in his *Almagest* in the 2nd century CE.

Canis Major is home to Sirius, the brightest star in the sky, as well as to several notable deep sky objects: the Canis Major Dwarf Galaxy, the open cluster Messier 41, the emission nebula NGC 2359 (also known as Thor’s Helmet), and the colliding spiral galaxies NGC 2207 and IC 2163.

Canis Major is the 43rd biggest constellation in the sky, occupying an area of 380 square degrees. It is located in the second quadrant of the southern hemisphere (SQ1) and can be seen at latitudes between +60° and -90°. The neighboring constellations are Columba, Lepus, Monoceros, and Puppis.

The constellation name Canis Major is pronounced /'keɪnɪs 'meɪdʒər/. In English, the constellation is known as the Great Dog. The genitive form of Canis Major, used in star names, is Canis Majoris (pronunciation: /'keɪnɪs mə'dʒɔːrɪs/). The three-letter abbreviation, adopted by the International Astronomical Union (IAU) in 1922, is CMa.

Canis Major belongs to the Orion family of constellations, along with Canis Minor, Lepus, Monoceros, and Orion.

Canis Major contains one Messier object, the star cluster Messier 41 (NGC 2287), and has four stars with known planets. The brightest star in Canis Major, Sirius (Alpha Canis Majoris), is also the brightest star in the night sky. There are no meteor showers associated with the constellation.

Canis Major contains 10 formally named stars. The star names approved by the International Astronomical Union (IAU) are Adhara, Aludra, Amadioha, Atakoraka, Furud, Mirzam, Muliphein, Sirius, Unurgunite, and Wezen.

Canis Major is commonly taken to represent the “greater dog” following the hunter Orion in Greek myth. The constellation is depicted as a dog standing on its hind legs, pursuing a hare, represented by the constellation Lepus.

Canis Major was described by Manilius as “the dog with the blazing face” because the dog appears to hold Sirius, the brightest star in the sky, in its jaws.

In mythology, Canis Major is associated with Laelaps, the fastest dog in the world, one destined to catch anything it pursued. Zeus gave Laelaps to Europa as a present, along with a javelin that could not miss. The gift proved to be an unfortunate one, as Europa herself met her end at the hands of her husband Cephalus, who was out hunting with the javelin.

Cephalus took the dog to Thebes in Boeotia (a Greek province north of Athens) to hunt down a fox that was causing some trouble there. Like Laelaps, the fox was very fast and was destined never to be caught. Once the dog found the fox and started chasing it, the race did not appear to have an end in sight. Zeus himself finally ended it and turned both animals to stone. He placed the dog in the night sky as the constellation Canis Major.

NGC 2207 and IC 2163 are colliding spiral galaxies in Canis Major. They are approximately 80 million light years distant. The galaxies were discovered by the English astronomer John Herschel in 1835. They have apparent magnitudes of 12.2 and 11.6, respectively. Three supernovae have been observed in NGC 2207 in recent decades; SN 1975A in 1975, SN 1999ec in 1999, and SN 2003H in 2003. The galaxies are in the process of tidal stripping, with the larger galaxy pulling stars and other material from the smaller one.



Near colliding NGC 2207 and IC 2163 as seen by the NASA/ESA Hubble Space Telescope. Image: NASA/ESA and The Hubble Heritage Team (STScI)

Canis Major is a constellation in the southern celestial hemisphere. In the second century, it was included in Ptolemy's 48 constellations, and is counted among the 88 modern constellations. Its name is Latin for "greater dog" in contrast to Canis Minor, the "lesser dog"; both figures are commonly represented as following the constellation of Orion the hunter through the sky. The Milky Way passes through Canis Major and several open clusters lie within its borders, most notably M41.

Canis Major contains Sirius, the brightest star in the night sky, known as the "dog star". It is bright because of its proximity to the Solar System. In contrast, the other bright stars of the constellation are stars of great distance and high luminosity. At magnitude 1.5, Epsilon Canis Majoris (Adhara) is the second-brightest star of the constellation and the brightest source of extreme ultraviolet radiation in the night sky. Next in brightness are the yellow-white supergiant Delta (Wezen) at 1.8, the blue-white giant Beta (Mirzam) at 2.0, blue-white supergiants Eta (Aludra) at 2.4 and Omicron² at 3.0, and white spectroscopic binary Zeta (Furud), also at 3.0. The red hypergiant VY Canis Majoris is one of the largest stars known, while the neutron star RX J0720.4-3125 has a radius of a mere 5 km.

History and mythology[edit]

In western astronomy[edit]

In ancient Mesopotamia, Sirius, named KAK.SI.SA2 by the Babylonians, was seen as an arrow aiming towards Orion, while the southern stars of Canis Major and a part of Puppis were viewed as a bow, named BAN in the Three Stars Each tablets, dating to around 1100 BC. In the later compendium of Babylonian astronomy and astrology titled MUL.APIN, the arrow, Sirius, was also linked with the warrior Ninurta, and the bow with Ishtar, daughter of Enlil.[2] Ninurta was linked to the later deity Marduk, who was said to have slain the ocean goddess Tiamat with a great bow, and worshipped as the principal deity in Babylon.[3] The Ancient Greeks replaced the bow and arrow depiction with that of a dog.[4]

Sirius A, the brightest star in the night sky, lies in Canis Major. In Greek Mythology, Canis Major represented the dog Laelaps, a gift from Zeus to Europa; or sometimes the hound of Procris, Diana's nymph; or the one given by Aurora to Cephalus, so famed for its speed that Zeus elevated it to the sky.[5] It was also considered to represent one of Orion's hunting dogs,[6] pursuing Lepus the Hare or helping Orion fight Taurus the Bull; and is referred to in this way by Aratos, Homer and Hesiod. The ancient Greeks refer only to one dog, but by Roman times, Canis Minor appears as Orion's second dog. Alternative names include Canis Sequens and Canis Alter.[5] Canis Syrius was the name used in the 1521 Alfonsine tables.[5]

The Roman myth refers to Canis Major as Custos Europae, the dog guarding Europa but failing to prevent her abduction by Jupiter in the form of a bull, and as Janitor Lethaeus, "the watchdog".[7] In medieval Arab astronomy, the constellation became al-Kalb al-Akbar, "the Greater Dog", transcribed as Alcheleb Alachbar by 17th century writer Edmund Chilmead. Islamic scholar Abū Rayḥān al-Bīrūnī referred to Orion as Kalb al-Jabbār, "the Dog of the Giant".[5] Among the Merazig of Tunisia, shepherds note six constellations that mark the passage of the dry, hot season. One of them, called Merzem, includes the stars of Canis Major and Canis Minor and is the herald of two weeks of hot weather.[8]

In Chinese astronomy, the modern constellation of Canis Major is located in the Vermilion Bird (南方朱雀; *Nán Fāng Zhū Què*), where the stars were classified in several separate asterisms of stars. The Military Market (軍市; *Jūnshì*) was a circular pattern of stars containing Nu³, Beta, Xi¹ and Xi², and some stars from Lepus.^[9] The Wild Cockerel (野雞; *Yějī*) was at the centre of the Military Market, although it is uncertain which stars depicted what. Schlegel reported that the stars Omicron and Pi Canis Majoris might have been them,^[10] while Beta or Nu² have also been proposed.^[11] Sirius was *Tiānláng* (天狼), the Celestial Wolf,^[12] denoting invasion and plunder.^[11] Southeast of the Wolf was the asterism *Húshǐ* (弧矢), the celestial Bow and Arrow, which was interpreted as containing Delta, Epsilon, Eta and Kappa Canis Majoris and Delta Velorum. Alternatively, the arrow was depicted by Omicron² and Eta and aiming at Sirius (the Wolf), while the bow comprised Kappa, Epsilon, Sigma, Delta and 164 Canis Majoris, and Pi and Omicron Puppis.^[13]

Both the Māori people and the people of the Tuamotus recognized the figure of Canis Major as a distinct entity, though it was sometimes absorbed into other constellations. *Te Huinga-o-Rehua*, also called *Te Putahi-nui-o-Rehua* and *Te Kahui-Takurua*, ("The Assembly of *Rehua*" or "The Assembly of Sirius") was a Māori constellation that included both Canis Minor and Canis Major, along with some surrounding stars.^{[14][15]} Related was *Taumata-o-Rehua*, also called *Pukawanui*, the Mirror of *Rehua*, formed from an undefined group of stars in Canis Major.^{[16][17]} They called Sirius *Rehua* and *Takarua*, corresponding to two of the names for the constellation, though *Rehua* was a name applied to other stars in various Māori groups and other Polynesian cosmologies.^{[18][19]} The Tuamotu people called Canis Major *Muihanga-hetika-o-Takurua*, "the abiding assemblage of *Takarua*".^[20]

ndering the sky ever since.^[24]

The Tharumba people of the Shoalhaven River saw three stars of Canis Major as *Wunbula* (Bat) and his two wives *Murrumbool* (Mrs Brown Snake) and *Moodtha* (Mrs Black Snake); bored of following their husband around, the women try to bury him while he is hunting a wombat down its hole. He spears them and all three are placed in the sky as the constellation *Munowra*.^[21] To the Boorong people of Victoria, Sigma Canis Majoris was *Unurgunite* (which has become the official name of this star^[22]), and its flanking stars Delta and Epsilon were his two wives.^[23] The moon (*Mityan*, "native cat") sought to lure the further wife (Epsilon) away, but *Unurgunite* assaulted him and he has been wandering the sky ever since.^[24]



our dogs are to be found among the constellations : Canis Major, Canis Minor, and the two hunting dogs of Canes Venatici, but Canis Major is undoubtedly the top dog. Indeed, Ptolemy in the *Almagest* called it simply *Κύων* (Kyon), the Dog. Canis Major is dominated by Sirius, popularly termed the Dog Star, the most brilliant star in the entire night sky; almost certainly the constellation originated with this star alone.

Aratus referred to Canis Major as the guard-dog of Orion, following on the heels of its master and standing on its hind legs with Sirius carried in its jaws. Manilius called it 'the dog with the blazing face' while Germanicus Caesar said that 'it belches forth fire from its mouth'. Canis Major seems to cross the sky in pursuit of the hare, represented by the constellation Lepus under Orion's feet. To the north of it

scampers Canis Minor, the smaller dog, either having lost the scent or sniffing out different prey.

Mythologists such as Eratosthenes and Hyginus said that the constellation represented *Laelaps*, a dog so swift that no prey could outrun it. This dog had a long list of owners, one of them being Procris, daughter of King *Erechtheus* of Athens and wife of *Cephalus*, but accounts differ about how she came by it. In one version the dog was given to her by *Artemis*, goddess of hunting; but a more likely account says that it is the dog given by *Zeus* to *Europa*, whose son *Minos*, King of *Crete*, passed it on to *Procris*. The dog was presented to her along with a javelin that could never miss; this turned out to be an unlucky gift, for her husband *Cephalus* accidentally killed her with it while out hunting.

Cephalus inherited the dog, and took it with him to *Thebes* (not *Thebes* in *Egypt* but a town in *Boeotia*, north of *Athens*) where a vicious fox was ravaging the countryside. The fox was so swift of foot that it was destined never to be caught –

yet *Laelaps* the hound was destined to catch whatever it pursued. Off they went, almost faster than the eye could follow, the inescapable dog in pursuit of the uncatchable fox. At one moment the dog would seem to have its prey within grasp, but could only close its jaws on thin air as the fox raced ahead of it again. There could be no resolution of such a paradox, so *Zeus* turned them both to stone, and the dog he placed in the sky as *Canis Major*, without the fox.

rather than 13) making up *Junshi*.

Sirius, the dazzling dog star

The name of the star Sirius comes from the Greek word Σείριος (Seirios) meaning 'searing' or 'scorching', highly appropriate for something so brilliant. Even though the name Sirius was known as far back as the time of Hesiod (c.700 BC), Ptolemy in the *Almagest* called it Κύων (Kyon), 'the Dog', the same name as for the whole constellation. He described it as 'the star in the mouth'. However, [Johann Bayer in his *Uranometria*](#) star atlas placed Sirius not in the mouth but on the dog's snout. Bayer was followed in this by [Bode in *Uranographia*](#), although not by [Hevelius](#) or the classically correct [Flamsteed](#) who both showed it in the mouth or jaws. Bode labelled Sirius with the alternative Latin name *Canicula*, which was sometimes used for the constellation of Canis Major as a whole.

In Greek times the rising of Sirius at dawn just before the Sun marked the start of the hottest part of the summer, a time that hence became known as the Dog Days. 'It barks forth flame and doubles the burning heat of the Sun', said Manilius, expressing a belief held by the Greeks and Romans that the star had a heating effect. The ancient Greek writer Hesiod wrote of 'heads and limbs drained dry by Sirius', and Virgil in the *Georgics* said that 'the torrid Dog Star cracks the fields'. Germanicus Caesar claimed that when it rose with the Sun it strengthened healthy crops but killed those with shrivelled foliage or feeble roots. 'There is no star the farmer likes more or hates more', according to Germanicus.

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↑Hardly is it inferior to the Sun, save that its abode is far away', wrote ↑Manilius, anticipating the modern view that stars are bodies like the Sun only vastly more distant. Yet, in contradiction of the supposed heating effects of Sirius, ↑Manilius continued: 'The beams it launches from its sky-blue face are cold'. That description of the ↑colour of Sirius is in contrast to Ptolemy's surprising reference to it as reddish, which has caused all manner of arguments.

In fact, ↑Manilius was nearly correct, for Sirius is a blue-white star, even larger and brighter than the Sun. It lies 8.6 light years away, making it one of the Sun's closest ↑neighbours. It has a white dwarf companion star, visible only through telescopes, that orbits it every 50 years.

In 14th-century Europe, Sirius was also known as ↑Alhabor or ↑Alabor, from the Arabic ↑al-'Abūr, a name commonly found on astrolabes of the time, meaning 'the one who crossed over'. It refers to an Arabic folk tale in which Sirius and Procyon were sisters and Canopus (which the Arabs called Suhail) was their brother. Sirius, it was said, crossed the Milky Way to join her brother in the southern sky, leaving Procyon behind, crying and dimmed by her tears, making her the faintest of the three stars. Geoffrey Chaucer used the name ↑Alhabor for Sirius in his celebrated ↑*Treatise on the Astrolabe* written in or around 1391. He based his description on astrolabes such as this English example which had a dog's head to indicate the position of the star. However, astronomers eventually settled on the original Greek name in preference to the Arabic alternative.

Beta Canis Majoris, which precedes Sirius across the sky, is known as Mirzam, from the Arabic *al-mirzam*. According to the Arabic astronomer al-Šūfī, the Arabs gave this name to any star that preceded a bright star. Hence it was also applied to Beta Canis Minoris, which precedes Procyon, and Gamma Orionis, which precedes Betelgeuse, but it is the attribution to Beta Canis Majoris which has stuck.

Ptolemy listed 11 stars as lying around the constellation but not forming part of it. Of these, nine were later used by Petrus Plancius to create a new constellation, Columba, the dove; one was transferred to Monoceros; and one was eventually incorporated in Canis Major.

Chinese associations

Chinese astronomers knew Sirius as *Tianlang*, 'celestial wolf', or simply *Lang*, 'wolf'; it was said to symbolize invasion and plunder. Other stars of Canis Major provide a good illustration of how Chinese constellations could be remodelled by different astrologer/astronomers. Take *Junshi*, for example, representing a market for soldiers to buy provisions and barter goods. In one version, this was a ring of 13 stars, including Nu and Xi Canis Majoris, extending into present-

day Lepus. At its centre was *Yeji*, a pheasant, represented by Beta Canis Majoris (Mirzam). But an alternative interpretation identified the pheasant as Nu-2 Canis Majoris, with Beta one of a ring of 6 stars (rather than 13) making up *Junshi*.