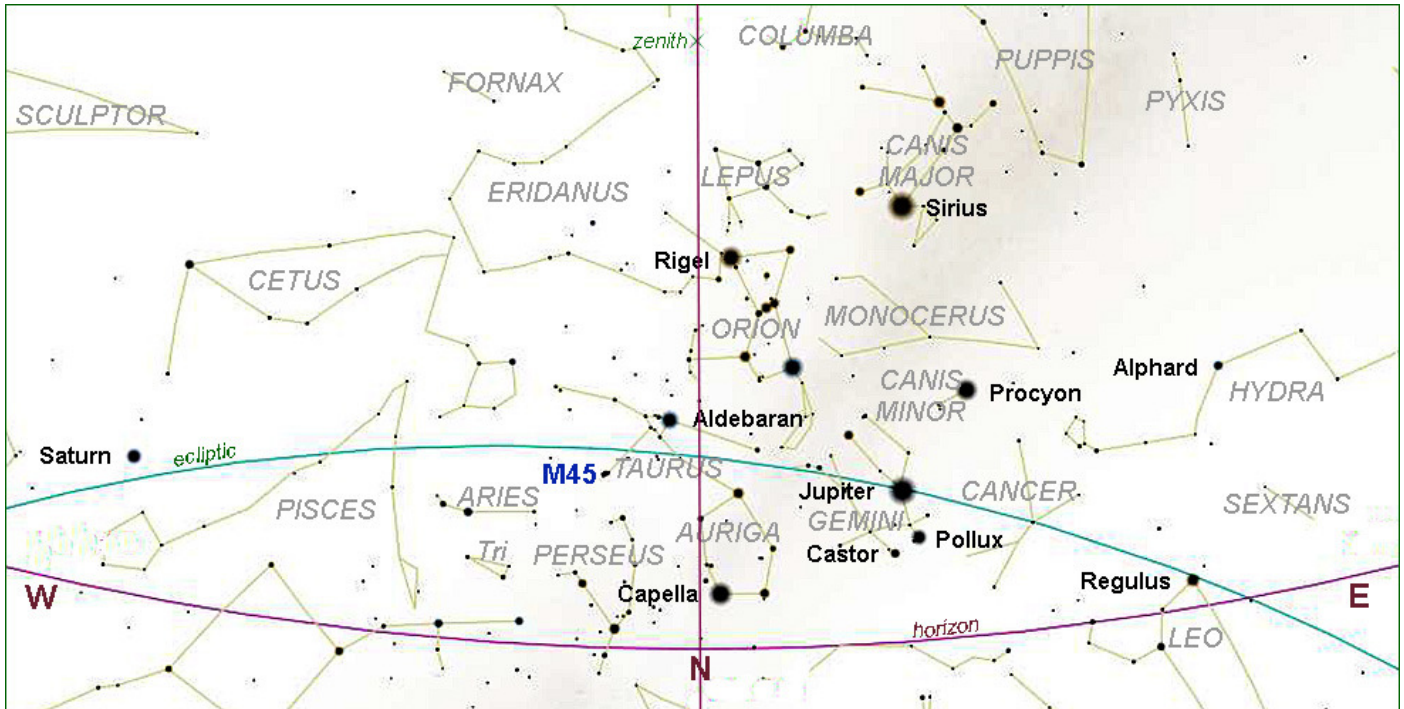
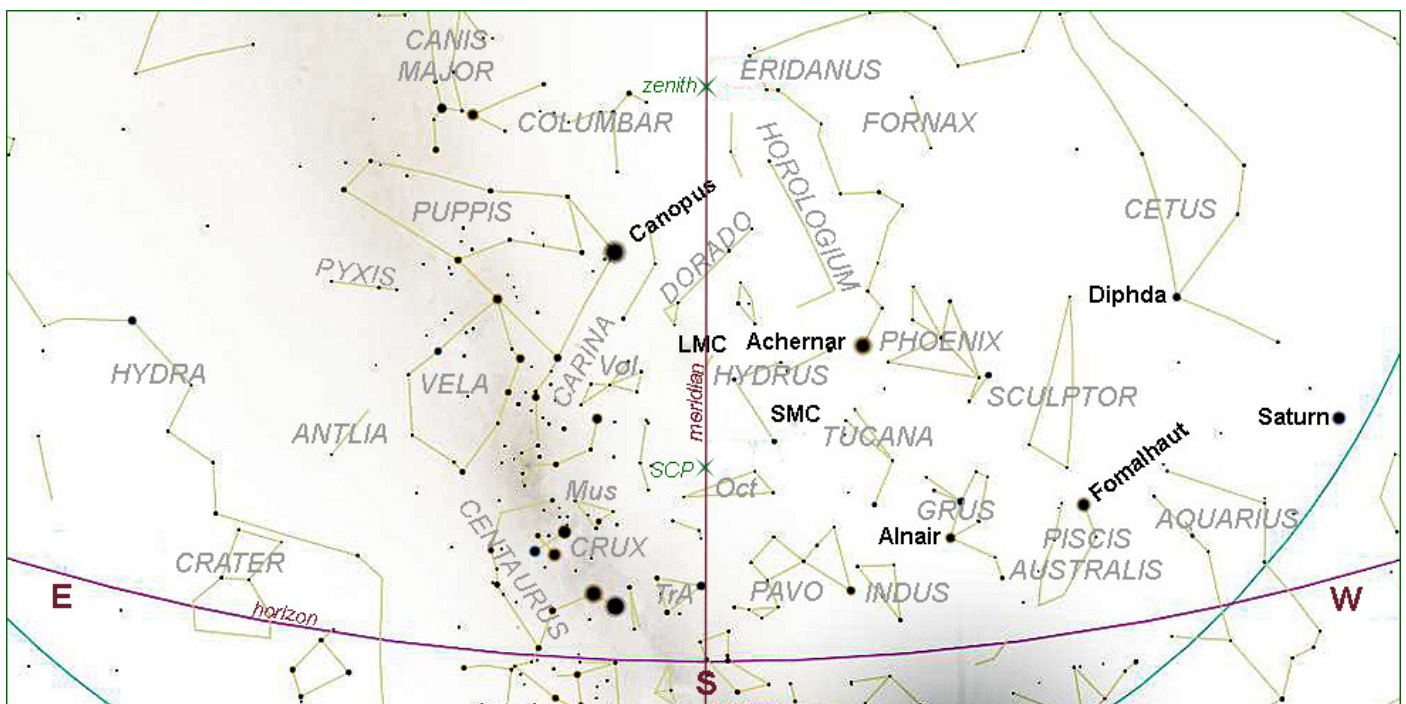


SKY CHARTS

EVENING SKY – JANUARY 15th at 22h00 (NORTH DOWN)



EVENING SKY – JANUARY 15th at 22h00 (SOUTH DOWN)



SUGGESTED EVENING OBSERVATION WINDOW

(Lunar observations notwithstanding)

<i>Date</i>	<i>Moon</i>	<i>Dusk end</i>
January 7	<i>Rise</i> 22h55 (81%)	21h43
to January 22	<i>Set</i> 22h05 (16%)	21h34

THE SOLAR SYSTEM

JANUARY HIGHLIGHTS based on the 2026 SKY GUIDE

(PLEASE NOTE: all events are as observed from **HERMANUS**, Western Cape, South Africa)

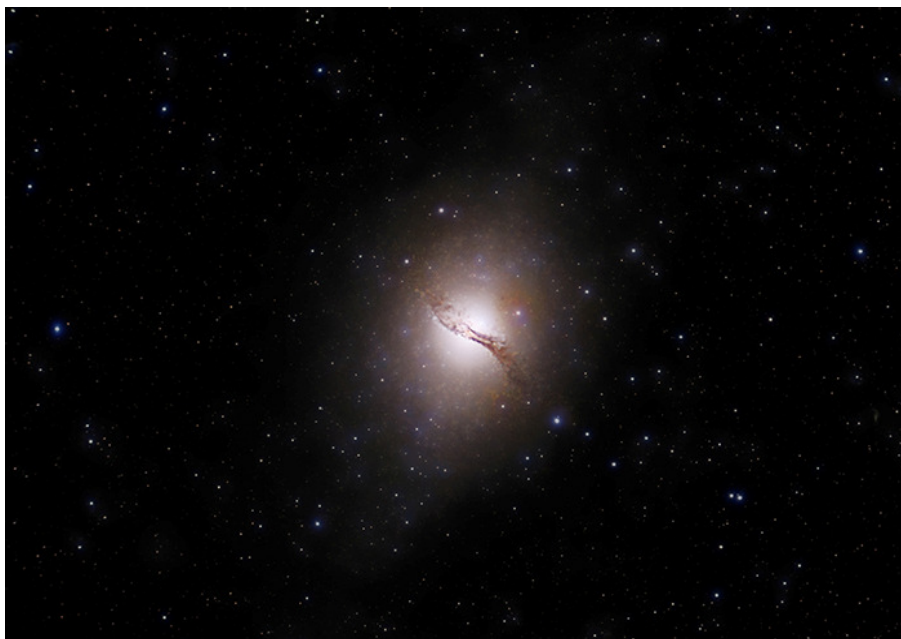
<i>Date</i>	<i>Time (SAST)</i>	<i>Item</i>
<i>ALMANAC</i>		
3	12h03	Full Moon - Supermoon (368 037 km)
4	00h54	Moon (97%) rises just after Jupiter and the Twins
5	22h01	Moon rises 41 minutes after the Beehive (M44) Titan at maximum from Saturn (3.2')
6	22h31	Moon (88%) rises 10 minutes after Regulus Callisto at maximum from Jupiter (10.3')
10	17h48	Last Quarter Moon
11	00h32	Moon (41%) passes 0.75° south-east of Spica
13		Titan at maximum from Saturn (3.2')
14		Moon near Antares (occultation below horizon) Callisto at maximum from Jupiter (10.1')
18	21h52	New Moon
21		Titan at maximum from Saturn (3.0')
22		Callisto at maximum from Jupiter (10.2')
23	10h57	Moon near Saturn and Neptune
26	06h47	First Quarter Moon
27	18h43	Moon near Uranus
29	05h18	Moon (72%) passes 1.9° north-west of the Pleiades (M45) Titan at maximum from Saturn (3.1')
31	00h38	Moon (95%) near Jupiter , Pollux and Castor (a fine quadrangle) Callisto at maximum from Jupiter (10.0')

ASTRONOMICAL EPHEMERIS

1	23h43	Moon at perigee (360 348 km)
2	08h20	Moon northernmost (+28.3°)
3	19h15	Earth at perihelion (0.983 30 au)
6	18h36	Mercury at aphelion Venus at superior conjunction
7	13h22	Moon at descending node
8	07h55	Venus furthest from Earth (1.711 au)
9	13h41	Mars in conjunction with the Sun
	10h09	Jupiter closest to Earth (4.232 au)
10	10h42	Jupiter at opposition
13	22h48	Moon at apogee (405 437 km)
15	00h58	Mercury furthest from Earth (1.430 au)
16	05h25	Moon southernmost (−28.3°)
21	17h49	Mercury at superior conjunction
22	02h03	Moon at ascending node Venus at aphelion
23	12h28	Pluto in conjunction with the Sun
29	23h53	Moon at perigee (365 878 km)
	17h02	Moon northernmost (+28.4°) (4) Vesta in conjunction with the Sun

CENTAURUS A

image by **Derek Duckitt**



- Imaging telescope / lens Other Refractor 120/600 mm
- Imaging camera Fujifilm X-T30 (CMOS)
- Mount Alt-azimuth tripod Sky Watcher HEQ5 Pro
- Guiding telescope / lens William Optics Refractor 32/120 mm Uniguide Scope
- Guiding camera ZWO Optical ASI 553 MC PRO (CMOS)
- Processed with Affinity Photo 2.5.7 Siril 1.4.0 Beta-1 Fujifilm XT-30 Android AppDeNoise (Topaz Labs) GraXpert AI Photoshop 2025 PHD Guiding (Stark Labs) 2Seti Astro Suite 2.7.1

SOLAR SYSTEM VISIBILITY

2026 JANUARY 15				Visibility
Sun	Sagittarius	Rise:	05h45	Never look at the sun without SUITABLE EYE PROTECTION!
Length of day	14 hours 13 minutes	Transit:	12h42	
		Set:	19h58	
Mercury	Sagittarius	Rise:	05h20	Too close to the Sun
Magnitude	-0.1	Transit:	12h34	
Phase	99%	Set:	19h48	
Diameter	5"			
Venus	Ophiuchus	Rise:	05h53	Too close to the Sun
Magnitude	-3.9	Transit:	13h01	
Phase	100%	Set:	20h08	
Diameter	10"			
Mars	Sagittarius	Rise:	05h39	Too close to the Sun
Magnitude	+1.1	Transit:	12h48	
Phase	100%	Set:	19h56	
Diameter	4"			
Jupiter	Gemini	Rise:	19h33	All night
Magnitude	-2.7	Transit:	00h35	
Diameter	46"	Set:	05h32	
Saturn	Aquarius	Rise:	10h49	Evening
Magnitude	+1.1	Transit:	17h00	
Diameter	17"	Set:	23h10	
Uranus	Taurus	Rises:	15h42	Evening
Magnitude	+5.6	Transit:	20h48	
Diameter	4"	Set:	01h58	
Neptune	Pisces	Rise:	11h02	Evening
Magnitude	+7.9	Transit:	17h08	
Diameter	2"	Set:	23h13	
Pluto	Capricornus	Rise:	06h23	Low in the West after sunset
Magnitude	+14.6	Transit:	13h33	
		Set:	20h43	

Phase: In a telescope, the inner planets (Mercury, Venus and Mars) appear to us in phases depending on the angle of the Sun's illumination, as does the Moon. The observed **angular diameter** is given in arc seconds.

Transit: When an object crosses the **local meridian**, it is said to 'transit'. The local meridian is an imaginary line from the horizon directly north passing overhead through *zenith* to the horizon directly south.

Magnitude: we are accustomed to hearing the brightness of stars described in terms of 'magnitude'. For example, the star Sirius, at magnitude, -1.4, is considerably brighter than the star Antares (in Scorpius) at +1.05. The scale is 'inverse'; the brighter the object, the lower the value. A 'good' human eye on a clear night can see a star down to a magnitude of about +6.

THE MOON

CRATER COPERNICUS

Type: Crater with three central mountains rising 1.2 km above the crater floor.

Diameter: 95 km.

Notes: Young and isolated formation with a large so-called “starburst” ray system across the surrounding mare overlying rays from the craters Aristarchus and Kepler (some of which are up to 800 km long) and can be seen with the naked eye. Due to its relative youth, the crater has remained in a relatively pristine shape since it formed. The circular rim has a discernible hexagonal form with a terraced inner wall and a 30 km wide, sloping rampart that descends nearly a kilometre to the surrounding mare.

There are three distinct terraces visible with arc-shaped landslides due to slumping of the inner wall as the crater debris subsided. Most likely due to its recent formation, the crater floor has not been flooded by lava. The terrain along the bottom is hilly in the southern half while the north is relatively smooth.

Age: It may have been created by debris from the breakup of the parent body of asteroid [495 Eulalia](#) 800 million years ago.

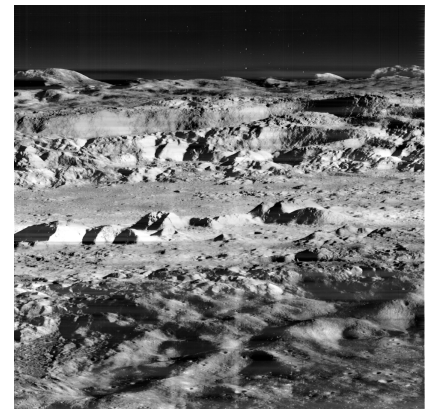
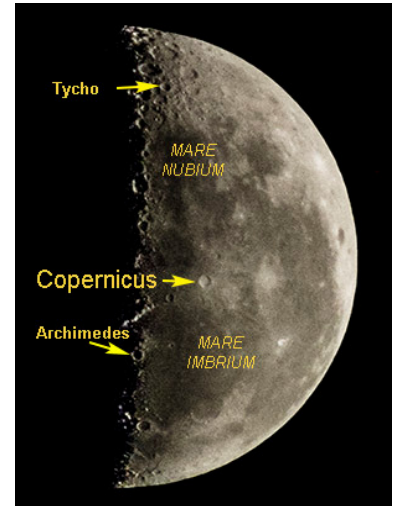
Location: North-west quadrant, slightly northwest of the centre of the Moon's Earth-facing hemisphere.

Visibility: Visible using binoculars and is also just visible to the naked eye.

Best seen: Last quarter plus one day (11th) and first quarter plus two days (28th).

Naming: Named after the astronomer **Nicolaus Copernicus**. Like many of the craters on the Moon's near side, it was given its name by Giovanni Riccioli, whose 1651 nomenclature system has become standardized.

Oblique view of the interior of Copernicus from [Lunar Orbiter 2](#), which orbited the Moon from 1966 to 1967. [NASA](#) photo.



No eclipses, lunar or solar, will be visible from southern Africa in December 2025

COMETS, ASTEROIDS AND METEORS

The link to the latest Comet, Asteroid and Meteor Section from Tim Cooper:

<https://assa.sao.ac.za/wp-content/uploads/sites/23/2025/12/ASSA-CAMnotes-2026-Number-1.pdf>

THE PLEIADES



(Accreditation: NASA, ESA, AURA/Caltech, Palomar Observatory, public domain)

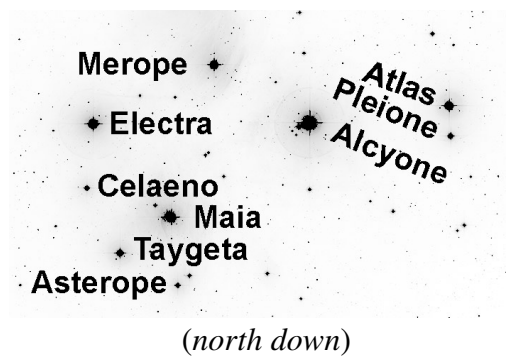
THE PLEIADES **Subaru Cluster, Seven Sisters, M45, NGC 1432**

Description	Open cluster	Visibility on 15th December :		
Constellation	Taurus			
Distance	444 ly, 136 pc	<i>Rise</i>	<i>Transit:</i>	<i>Set:</i>
Visual magnitude	+1.6	16h02	20h51	01h40
Apparent size	120 arcmin	Naked eye:	Yes, 6 or 7 stars	
Actual size	15.1 ly, 4.6 pc	Binoculars:	Yes, more than 100 stars	
RA/Dec J2000	3h47m29s / +24°06'18"	Telescopes:	Yes, with nebulosity in larger telescopes	
Alt/Az	+29°09'33" / 341°56'41"			

Description and Observation

The Pleiades is an open star cluster containing middle-aged hot [B-type stars](#) in the north-west of the constellation Taurus.

This beautiful and well known asterism is among the nearest to the Earth, is the nearest Messier object and is the cluster most obvious to behold. Though containing hundreds of stars, only a handful are visible to the naked eye, some being surrounded by swirls of nebulosity. This blue nebulosity, prominent as a result of reflection from nearby cluster members, is unrelated to the cluster which is only passing through a particularly dusty region of the interstellar medium.



At least six of the member stars are visible to the naked eye. In moderate conditions, this number increases to nine and under clear, dark skies, more than a dozen are apparent. In 1579, well before the invention of the telescope, German astronomer **Michael Mästlin**, correctly drew 11 Pleiades stars while **Kepler** quoted observations of up to 14.

The nine brightest stars are concentrated in a field just over 1° in diameter. A great binocular object, the cluster displays over a hundred stars. With telescopes, a wide-angle very low power eyepiece is needed to view the entire group. A number of double and multiple stars are contained in the cluster. Modern observations reveal at least 500 stars spread over a 2° field – four times the diameter of the Moon!

With the cluster situated only 4° off the ecliptic, lunar occultations are quite frequent. Venus, Mercury and Mars occasionally pass through it, an appealing spectacle especially for amateurs with budget equipment.

Also note the lovely arc of (unrelated) stars to the immediate south!

Discovery and History

The earliest Greek references to the Pleiades were by **Homer** in *The Iliad* (c. 750 B.C.) and *Odyssey* (c. 720 B.C.) and by **Hesiod** (c. 700 B.C.). Some Greek astronomers considered the Pleiades to be a distinct constellation.

In 1767, the **Rev. John Michell**, having calculated the odds of finding a group of bright stars such as the Pleiades by chance alignment at 1 in 496 000, correctly concluded that they, and many other star clusters, must be physically related. German astronomer Mädler noted (c. 1846) that the stars of the Pleiades had no proper measurable motion relative to one another. This common proper motion was further evidence that they formed a physical group.

Charles Messier included the Pleiades as number 45 in his first list of comet-like objects, published in 1771. This inclusion is curious given that most of his objects are much fainter and more easily confused with comets, scarcely possible with the Pleiades. He may have merely wanted a larger catalogue than his scientific rival **de Lacaille** whose 1755 catalogue contained 42 objects.

Mythology

The Seven Sisters of Greek mythology were **Asterope**, **Merope**, **Electra**, **Maia**, **Taygeta**, **Caeleno** and **Alcyone** (*pron. al-SY-uh-nee*) and are sometimes said to be nymphs in the train of Artemis. Their father was Atlas, a Titan who held up the sky, and their mother the oceanid Pleione, protectress of sailing.

The name of the Pleiades comes from Ancient Greek. It probably derives from plein ("to sail") because of the cluster's importance in delimiting the sailing season in the Mediterranean Sea: "The season of navigation began with their heliacal rising". In mythology, the name was used for the seven divine sisters, the Pleiades, the name supposedly deriving from that of their mother Pleione and effectively meaning "daughters of Pleione". In reality, the name of the star cluster almost certainly came first and Pleione was invented to explain it.

Old English and German names indicate that the Pleiades were once compared to a "Hen with Chicks".

They are called "Kiymah" in Hebrew and the Bible refers to them three times, Job 9:7-9, Job 38:31-33 and Amos 5:8. The Pleiades are revered in Hindu mythology as Kritika, the six mothers of the war god Skanda

who developed six faces. Some scholars of Islam suggest that the Pleiades (“Al thuraiya” in Arabic) are the star Najm which is mentioned in the Quran. Their Persian name is “Soraya”, after which the former Iranian empress was named.

In Japan, the Pleiades are named “Subaru”. The Japanese automaker derives its name from this cluster which is represented in its corporate logo. They were known since antiquity to cultures all around the world including the Maoris (“Matariki”), Australian aborigines, Mayans (“Tzab-ek”), Azteks (“Tianquiztli”) and the North American Sioux and Cherokee.

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With the cluster situated only 4° off the ecliptic, lunar occultations are quite frequent. Venus, Mercury and Mars occasionally pass through it, an appealing spectacle especially for amateurs with budget equipment.

Also note the lovely arc of (unrelated) stars to the immediate south east!

Chinese associations

In Chinese astronomy the Pleiades star cluster was known as *Mao* and was said to represent a hairy head – the head of whom or what is unexplained, although the idea of hairiness might come from the cluster’s hazy appearance. *Mao* is also the name of the 18th [lunar mansion](#).

A star just south of the **Hyades**, usually identified as Sigma Tauri, was *Fuer*, ‘whisper’, possibly referring to someone who has the ear of the Emperor or perhaps a scout indicating the presence of animals for catching in the net. Straddling the ecliptic between the Pleiades and Hyades lay *Tianjie*, ‘celestial street’, consisting of **Kappa** and **Omega Tauri**, apparently representing the route used by the Emperor when he went hunting. The fourth-magnitude star **37 Tauri** nearby was known as *Yue*, the [Moon star](#); it lies on the opposite side of the sky from the Sun star, *Ri*, in Libra, reflecting the fact that when the Moon is full it lies opposite the Sun in the sky. In ancient times, the full Moon in Bi signalled the start of the rainy season in China. To the north of *Tianjie* and *Yue* a group of four stars (some say five), including **Chi** and **Psi Tauri**, formed *Lishi*, a whetstone for sharpening blades.

Zeta Tauri was *Tianguan*, representing a gate or door on the ecliptic even though it is only a single star. It lay directly opposite in the sky to *Tianyue* in Sagittarius and Ophiuchus, which represented a lock or keyhole on the ecliptic. **Beta Tauri** to the north was one of the five chariots of the celestial emperors, *Wuche*, the others being in [Auriga](#). A line of six stars running almost parallel to the ecliptic from **136** to **Tau Tauri** formed *Zhuwang*, six sons of the Emperor.

Between Zeta Tauri and the Hyades lay *Tiangao*, a group of four stars including **Iota Tauri**, representing a lookout tower for weather watching (although another interpretation sees it as a place to make offerings to the gods); the observers were *Siguai*, consisting of **139 Tauri** plus two stars in [Orion](#) and one in Gemini.

To the south of the Hyades lay a second constellation whose Chinese name transliterates as *Tianjie*. This one consisted of eight stars and is said to represent a token carried by ambassadors to identify themselves when leaving the country; however, Sun and Kistemaker suggest *Tianjie* was the regalia of the great hunter *Shen*, the Chinese equivalent of [Orion](#). On the border between Taurus and Cetus was *Tianlin*, four stars (Omicron, Xi, 4 and 5 Tauri) representing a storehouse for millet or rice.

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Please keep in touch...

Have a look at our excellent website, edited by Derek Duckitt - <https://www.hermanusastronomy.co.za/>

Contact ASSA - Get in touch with officers of the Society - we're real people with a passion for astronomy, so [contact us and let's talk!](#)

<http://www.mnassa.org.za/>

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Edited by Peter Harvey - petermh@hermanus.co.za