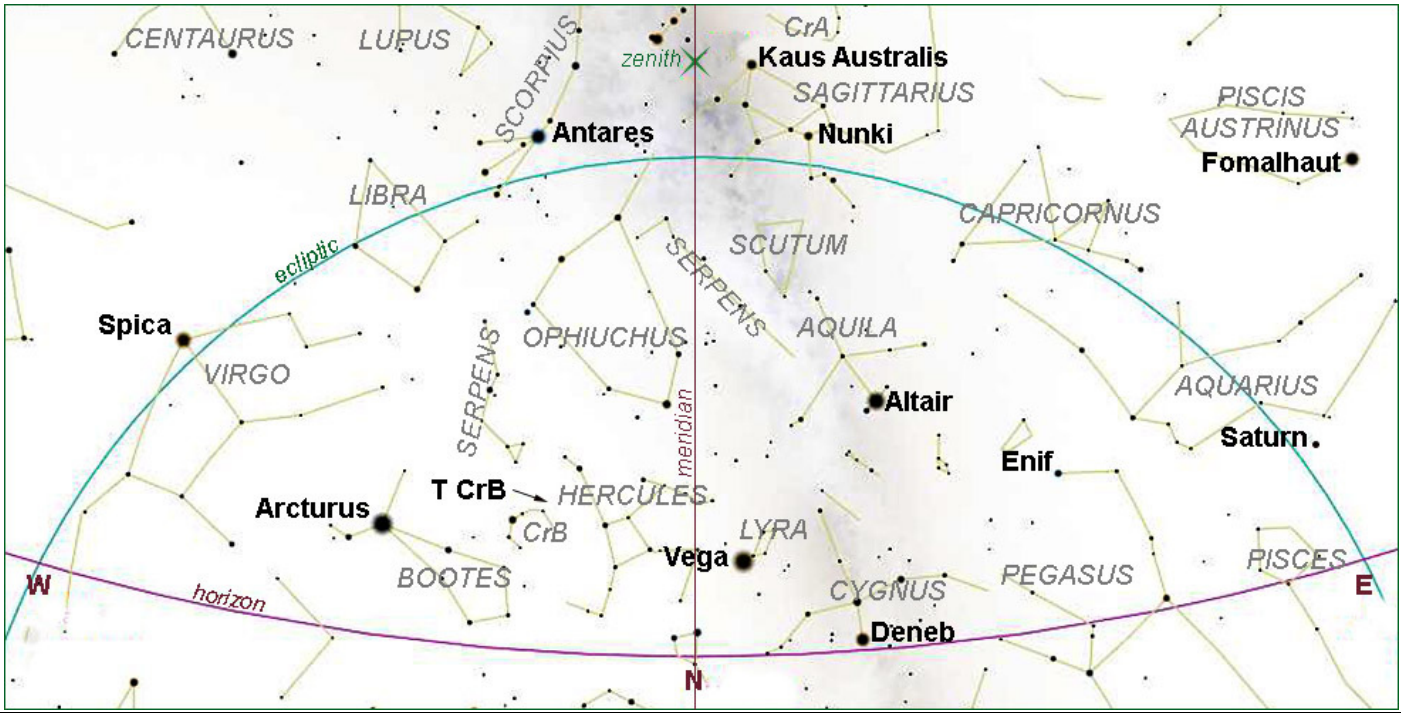
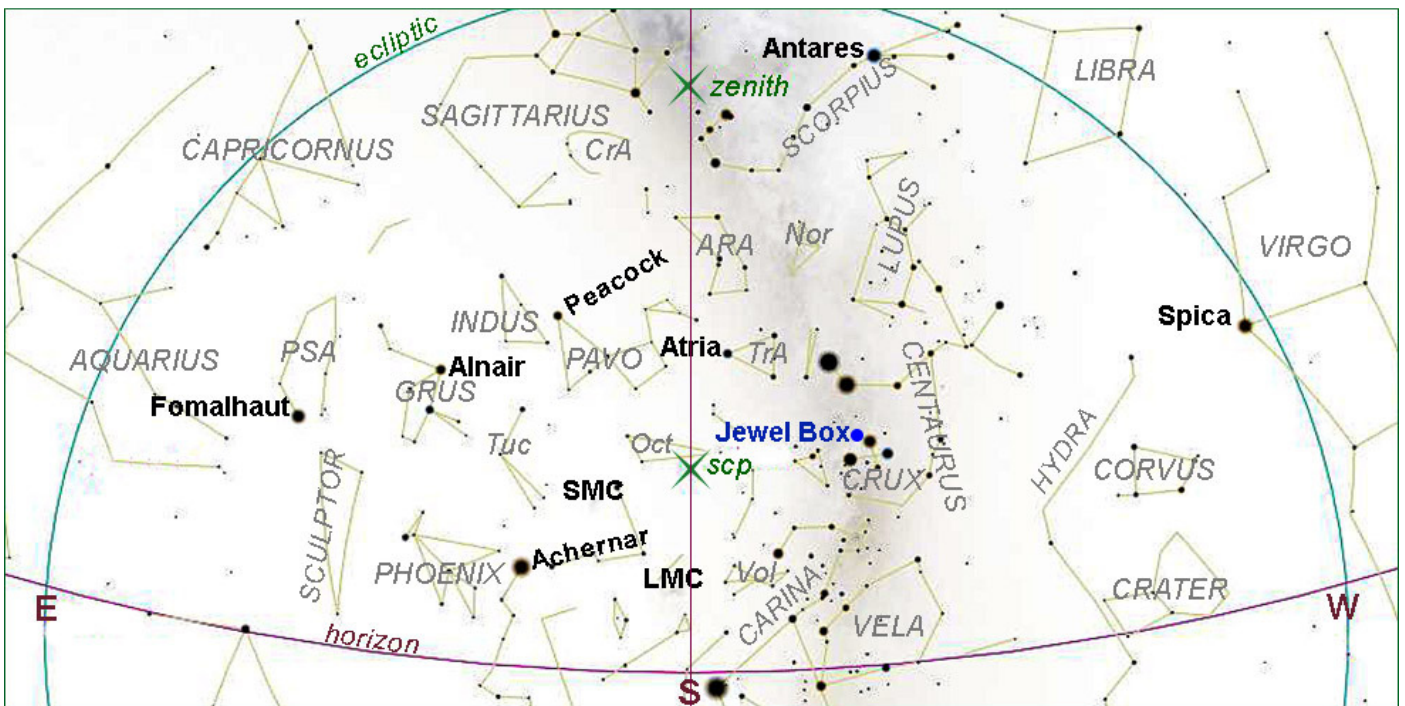


SKY CHARTS

EVENING SKY AUGUST 15th at 21h00 (NORTH DOWN)



EVENING SKY AUGUST 15th 21h00 (SOUTH DOWN)



-SUGGESTED EVENING OBSERVATION WINDOWS
(Lunar observations notwithstanding)

<i>Date</i>	<i>Moon</i>	<i>Dusk end</i>
July 26 to August 6	<i>Rises</i> 23h53 (72%) <i>Sets</i> 20h04 (4%)	19h26 19h32
August 24 to September 25	<i>Rises</i> 22h50 (72%) <i>Sets</i> 20h44 (4%)	19h44 19h51

THE SOLAR SYSTEM

PLEASE NOTE: all events are as predicted for **HERMANUS**, Western Cape, South Africa.

AUGUST HIGHLIGHTS from THE SKY GUIDE 2024

<i>Date</i>	<i>Time (SAST)</i>	<i>Item</i>
1	07h59	Moon northernmost (+28.47°)
4	13h13	New Moon
		Mercury stationary
9	03h32	Moon at apogee (405 298 km)
	03h06	Moon at descending node
10		Moon (31%) near Spica (α Vir)
12	17h19	Moon first Quarter
14		Moon (70%) near Antares (α Sco)
15	12h10	Moon southernmost (-28.6°)
19	20h26	Full Moon , Supermoon (33.01')
		Mercury at inferior conjunction
21		Moon (94%) rises about 21° after Saturn
	07h05	Moon at perigee (360 199 km)
22	12h27	Moon at ascending node
26	11h26	Moon last quarter
28	13h09	Moon northernmost (+28.6°)
		Mercury stationary

METEOR ACTIVITY

<u>From SGSA 2024</u>	<i>Maximum Date/Time</i>	<i>Moon on max Date/Time</i>	<i>Duration</i>	<i>Radiant</i>	<i>ZHR</i>	<i>Velocity Km/sec</i>
η Eridanids	August 8 01h00 – 05h30	Good 14% sets 21h56	July 31 – August 19	30° east of Deneb (β Cet)	3	64

SOLAR SYSTEM VISIBILITY

2024 AUGUST 15th

When visible?

Sun	Leo	Rise:	07h22	Never look at the sun without SUITABLE EYE PROTECTION!
Length of day	10 hours 51 minutes	Transit:	12h47	
		Set:	18h13	
Mercury	Leo	Rise:	07h24	Too close to the Sun
Magnitude	+0.4	Transit:	13h06	
Phase	3%	Set:	18h47	
Diameter	11"			
Venus	Leo	Rise:	08h24	Low in the west after sunset
Magnitude	-3.3	Transit:	14h04	
Phase	94%	Set:	19h45	
Diameter	11"			
Mars	Taurus	Rise:	03h13	Morning
Magnitude	+0.8	Transit:	08h10	
Phase	88%	Set:	13h08	
Diameter	6"			
Jupiter	Taurus	Rise:	03h11	Morning
Magnitude	-2.2	Transit:	08h09	
Diameter	37"	Set:	13h07	
Saturn	Aquarius	Rise:	20h01	Throughout the night
Magnitude	+0.7	Transit:	02h26	
Diameter	19"	Set:	08h46	
Uranus	Taurus	Rises:	01h40	Morning
Magnitude	+5.7	Transit:	06h46	
Diameter	4"	Set:	11h53	
Neptune	Pisces	Rise:	20h58	Throughout the night
Magnitude	+7.8	Transit:	03h07	
Diameter	2"	Set:	09h13	
Pluto	Capricornus	Rise:	16h07	Throughout the night
Magnitude	+14.4	Transit:	23h17	
		Set:	06h32	

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 the *zenith* to the horizon directly south.

Magnitude: we are accustomed to hearing stars described in terms of 'magnitude'. For example, the planet Jupiter at magnitude -1.8 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 down to a magnitude of about +6.

THE MOON

POSIDONIUS

Type: Crater.

Diameter: 95 Km

Depth: 2.3 Km

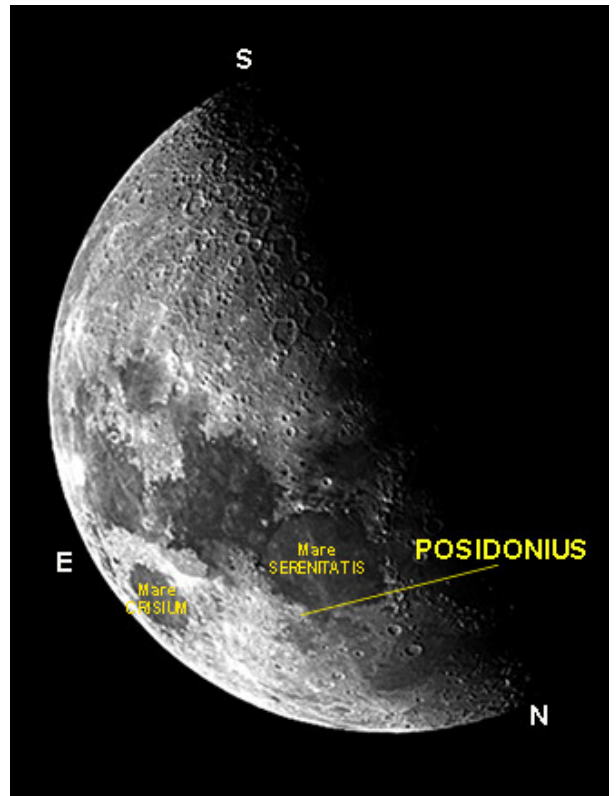
Notes: The rim of Posidonius is shallow and obscured, especially on the western edge, and the interior has been overlain by a lava flow in the past. The crater ramparts can still be observed to the south and east of the crater rim, and to a lesser degree to the north. The crater Chacornac is attached to the southeast rim, and to the north is Daniell.

Named after ancient Greek philosopher and geographer Posidonius of Apamea.

First observed by the lunar cartographer [Julius Schmidt](#) in 1867, who noted the similarity to the bright patch surrounding the crater [Linné](#).

Best seen about August 10th and 23rd.

Location: North-eastern edge of **Mare Serenitatis**.



No eclipses, lunar or solar, will be visible from southern Africa in July 2024

INDIGENOUS LORE

Mantis's Frozen Shoe

The Moon was one of the most important tellers of time for southern Africans. The words moon and month are closely associated in most indigenous languages as they are in English. In all traditional societies, the moon's phases represent the sequence of life's passage: birth, growth, decay and death. For southern Africa's people her renewal is a symbol of the immortality of the soul and her importance in their spiritual lives remains eminent.

According to some Sotho-Tswana people, the waxing Moon - when the horns point upwards - contains disease. Yet when it waned and the shape was reversed, it spelled out all manner of illness over the Earth. Another view held that the Moon in its waning phase was pouring out much needed rain called moonwater.

Many Tswana people believe that the moon had a feminine persona as her light is not as scorching as the Sun's. The light of the moon is associated with happiness when children can play outside at night. It was believed that on the one night of the month when the moon was invisible to people, baboons alone could see it. On this night, the ancestral spirits slept and could not be summoned by the traditional doctors to intercede with God. On this night, people were well and truly alone. The moon's reappearance at dusk the next day was therefore a joyful occasion when people would welcome it back by pointing to it and throwing things at it in the belief that such actions brought the objects of their desire: food, cattle, a wife. The day after a new moon was a day of rest when it was forbidden to till the fields or cut down trees. The moon was to be left undisturbed on this day to 'become strong first' so that people and the Moon could face the new growth phase together. The day after a New Moon was dedicated to arranging safeguards for the forthcoming month. Cleansing *Leshwalo* (a sweet scented herb) would be burned amongst the livestock and *dipheko* (protective medicines) were scattered around the homestead.

From "*Flowers in the Sky*" by **Clarissa Hughes**

LOOKING UP



The FORS1 instrument on the ESO [Very Large Telescope](#) (VLT) at ESO's [Paranal](#) Observatory was used to take this exquisitely sharp close up view of the colourful Jewel Box cluster, NGC 4755. The telescope's huge mirror allowed very short exposure times: just 2.6 seconds through a blue filter (B), 1.3 seconds through a yellow/green filter (V) and 1.3 seconds through a red filter (R).

The Jewel Box

NGC 4755, Kappa Crucis cluster, Caldwell 94

<i>Description</i>	Star cluster	<i>Visibility on August 15th 2024</i>		
<i>Constellation</i>	Crux			
<i>Distance</i>	6.4 kly, 2.0 pc	<i>Rises</i>	<i>Transits</i>	<i>Sets</i>
<i>Apparent size</i>	10.0 arcmin	Does not rise	16.00	Does not set
<i>Actual size</i>	18.7 ly, 5.7 pc			
<i>Magnitude</i>	+4.19	<i>Naked Eye</i>	Yes in good conditions	
<i>J2000 Dec/RA</i>	-60°21'43" / 12h53m39s	<i>Binoculars</i>	Yes	
<i>Alt/Az</i>	+36°38'18" / 216°22'45"	<i>Telescopes</i>	Yes	

JEWEL BOX CLUSTER

NGC 4755 is a stunning open cluster in the constellation **Crux**, the Southern Cross. It is known as both the Jewel Box and the Kappa Crucis cluster (after its most prominent member).

Properties: an A-shaped asterism with an apparent magnitude of +4.2. It looks like a single fuzzy star to the unaided eye. The cluster contains around 100 stars within a 10' diameter area. Most are blue giants, the brightest of which is **Kappa Crucis** (Bayer star designation), a blue supergiant of visual magnitude +5.9 and spectral type B5 1a, surface temperature 13 600 Kelvin. The fourth-brightest is a magnitude +7.6 red supergiant of class M2 that contrasts strongly against its hot, blue companions. Distance estimates for the Jewel Box range from 6,400 to 8,150 light years. This cluster is one of the youngest known with an estimated age of only 7.1 million years.

The **Coal Sack**, a huge dark area within the band of the Milky Way, appears close to NGC 4755 to its south-west. This dark nebula is probably much closer than the cluster at only 500 to 600 light years distance.

Physical characteristics

The Jewel Box cluster is one of the youngest known open clusters. The mean radial velocity of the Jewel Box cluster is 21 kilometres per second (13 mi/s). The brightest stars in the Jewel Box include some of the brightest stars in the Milky Way galaxy.

Calculating its distance is difficult due to the proximity of the Coalsack Nebula, which obscures some of its light.

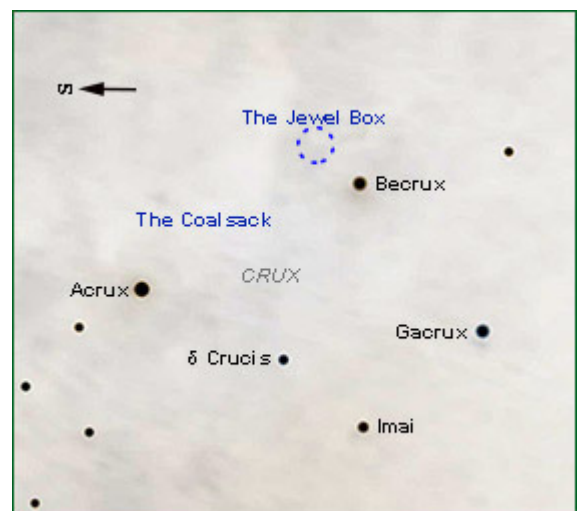
DISCOVERY AND HISTORY

Discovery : The cluster is one of the finest objects discovered by **Nicolas Louis de Lacaille** during his visit to South Africa in 1751-1752. **John Herschel** described this famous group of bright young stars as "a casket of variously coloured precious stones" and "...a superb piece of fancy jewellery", hence the name "the Jewel Box" cluster.

AMATEUR OBSERVATION

Location

The Jewel Box is only visible from southern latitudes and appears close to **Mimosa** (Beta Crucis), the easternmost star of the Southern Cross.



Prominent members

The central part of the cluster is framed by bright stars making up an "A"-shaped asterism. The bar of the "A" consists of a line of four stars: BU Cru, a magnitude +6.92 B2 supergiant and eclipsing binary. Next to it is BV Cru, a magnitude +8.7 B0.5 giant and Beta Cepheid variable. Next in line is DU Cru, an M2 red supergiant that varies irregularly between magnitude +7.1 and +7.6. The last of the four is CC Cru, a magnitude 7.83 B2 giant and ellipsoidal variable.

Each leg of the base of the asterism's outline is marked by a blue supergiant star. HD 111990 (HIP 62953) is magnitude +6.77 and B1/2. The star κ Cru itself is magnitude +5.98 and B3.

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!](#)

With Grateful thanks to the following:

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