

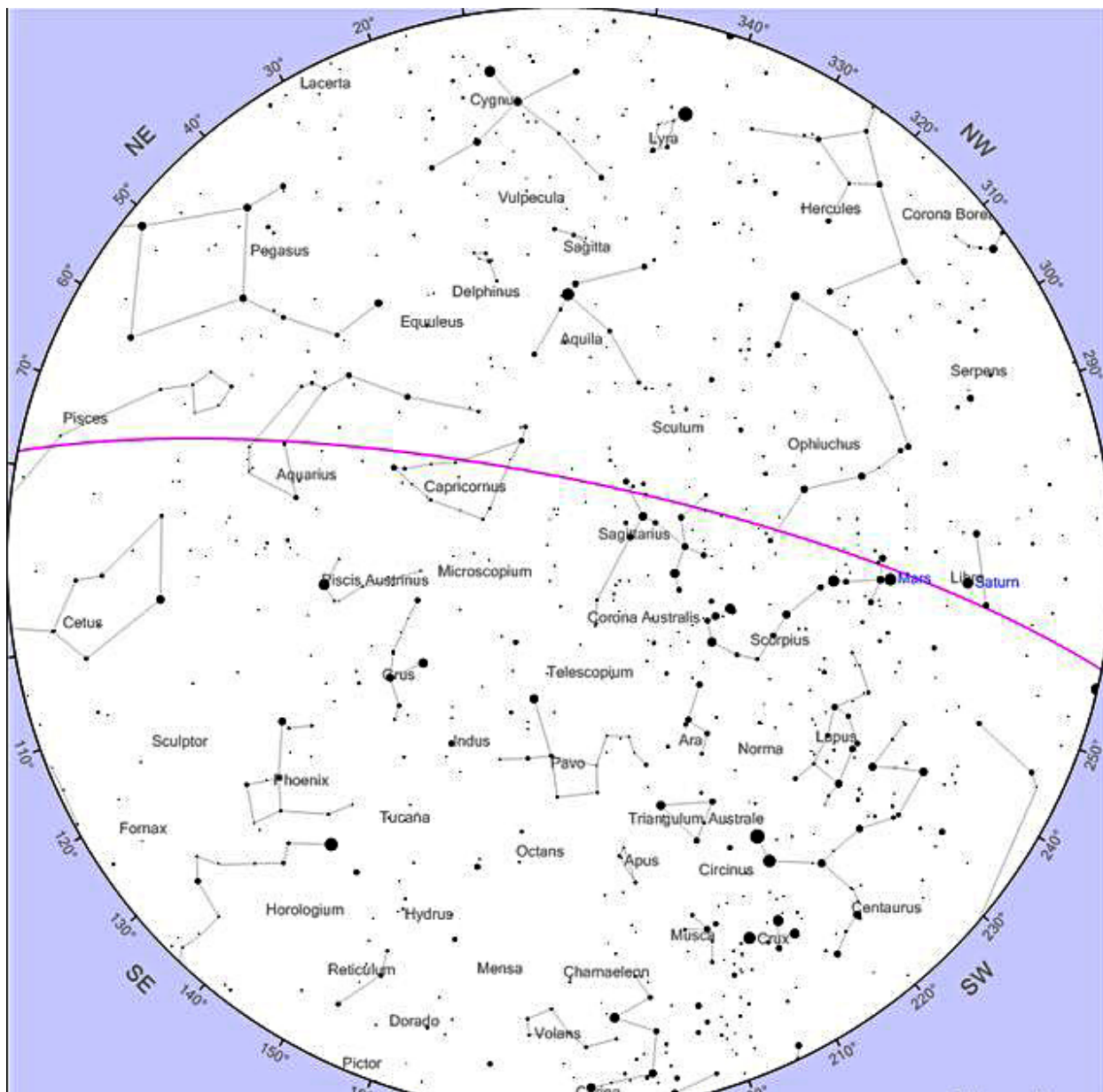


## HERMANUS ASTRONOMY CENTRE

### THE SKY THIS MONTH : SEPTEMBER 2014

<http://www.hermanusastronomy.co.za/>

**NOTE:** The sky maps for this month are attached as separate attachments to the covering e-mail. This will give you the ability to view them on screen in a larger format or to print them full page for use outside to find the stars. Some members have reported difficulty in printing these maps; the best method is to download them, [www.heavens-above.com](http://www.heavens-above.com), and from the download directory, then to highlight them and click on preview; once in the preview menu just press print!



**EVENING SKY 15<sup>th</sup> September at 21<sup>h</sup>00**

(The mauve line denotes the ecliptic)

## THE EVENING SKY

1. Refer to the map above for the evening sky on 15<sup>th</sup> September.

Highlights from the Sky Guide Africa South:

<i>Date</i>	<i>Time</i>	<i>Item</i>
1	19h41	<b>Moon</b> occults <b>theta Librae</b> (mag 4.1, double) – dark limb event, suited to binoculars
2	13h00	1st quarter <b>Moon</b>
3	15h00	<b>Moon</b> furthest south (-18.6°)
4	18h00	<b>Moon</b> near <b>Pluto</b>
5	19h00	<b>Venus</b> near <b>Regulus</b>
20	16h00	<b>Moon</b> at apogee (405 800 km)
	23h00	<b>Mercury</b> near <b>Spica</b>
21	19h00	<b>Mercury</b> at eastern elongation (26°)
23	04h00	Equinox, first day of Spring
26		<b>Mars</b> near <b>rho Ophiuchi Nebula</b>
28	14h00	<b>Mars</b> near <b>Antares</b>
30	21h00	<b>Moon</b> furthest south (-18.5°)

### 2. THE SOLAR SYSTEM:

Of the naked-eye planets, **Saturn**, with his rings beautifully angled for our enjoyment, is visible for the first half of the night. **Mercury**, at greatest eastern elongation on 21<sup>st</sup>, pays a fleeting visit to **Spica**, the .95 magnitude  **$\alpha$  Virginis**. **Mars** is recommended viewing this month; watch the red Roman War God slipping through the claws of the Scorpion to square up to the red giant **Antares**. All are well placed for observation with binoculars – not a neck-breaking exercise! **Neptune** and **Uranus** are still there and best in the early morning with a telescope.

Eclipses – none predicted for **September**

### 3. THE DEEP SKY:

In Aquila (the Eagle):

**NGC 6781** planetary nebula (magnitude 12 – telescope)

In Pavo (the Peacock):

**NGC 6744** spiral galaxy (magnitude 9 – binoculars)

**Starfish NGC6752** globular cluster (magnitude 5.4)

In Vulpecula (the Fox):

**Dumb-Bell Nebula** planetary nebula (magnitude 8.1 – binoculars)

In Sagitta (the Arrow):

**M71** globular cluster (magnitude 8.3 – binoculars)

In Pegasus (the Winged Horse):

**M15** globular cluster (magnitude 6.4 – binoculars)

In Delphinus (the Dolphin):

**NGC 6934** globular cluster (magnitude 8.9 – binoculars)

In Capricornus (the Water Goat):

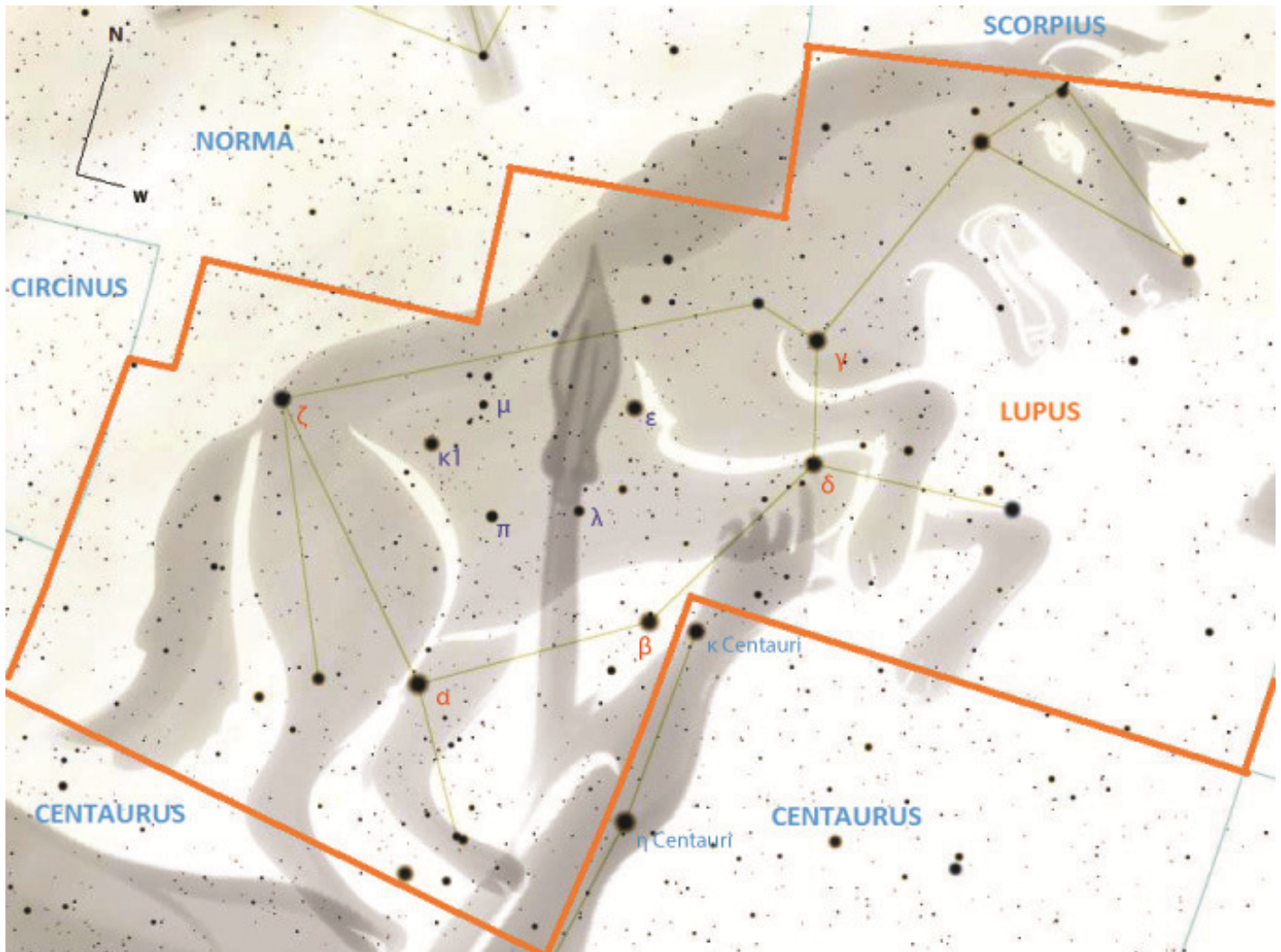
**M30** globular cluster (magnitude 7.5 – binoculars)

In Dorado (the Swordfish):

The **Starfish Cluster** (NGC 1922), on the border with Mensa (binoculars)

## CONSTELLATIONS OF THE MONTH

LUPUS, the Wolf, was the subject of Johan Retief's challenge to the Binocular Observation Programme back in April of this year. I reported a stiff neck at the time after trying to angle my binos up to about 70-odd degrees and used this as an excuse for failing the challenge. Lupus is now more conveniently placed lower in the south-western evening sky for the non-rubberneckers like myself (still unable to get rid of the stiff neck, though!).



The challenge was to find the double stars using only binoculars. There are many in this area and I have labelled a few in dark blue.

From *Ian Ridpath's "Star Tales"*:

The ancient Greeks called this constellation Therium, representing an unspecified wild animal, while the Romans called it Bestia, the Beast. It was visualized as impaled on a long pole called a thyrsus, held by the adjoining constellation of Centaurus, the Centaur. Consequently, the constellations of the Centaur and the animal were usually regarded as a combined figure. The Babylonians knew this constellation as UR.IDIM, meaning 'wild dog' or 'wolf'. Eratosthenes said that the Centaur was holding the animal towards the altar (the constellation Ara) as though about to sacrifice it. Hyginus referred to the animal as simply 'a victim', while Germanicus Caesar said that the Centaur was either carrying game from the woods, or was bringing gifts to the altar. The identification of this constellation with a wolf seems to have started in Renaissance times.

One is tempted to recall the story of Lycaon, king of the Arcadians, who served Zeus with the flesh of the god's own son and was punished by being turned into a wolf (see Boötes). But that story has no connection with this constellation, which seems to have been overlooked by the mythologists. The fact that it is an imported constellation probably explains why the Greeks had no myths for it. None of the stars of Lupus have names.

#### *Chinese associations*

Much of Lupus was occupied by a Chinese constellation called Qiguan, said to represent either cavalry officers or the Emperor's guardsmen. Qiguan consisted of 27 stars, making it one of the largest Chinese constellations in terms of numbers. South of Qiguan, Kappa Lupi was Qizhenjiangjun, the cavalry general, while Zeta, Rho and Sigma Lupi were Cheqi, representing chariots and horsemen. Following the cavalry were the infantry, represented by the 12 stars of Jizu; most of this constellation lay in neighbouring Scorpius but it included Eta and probably two other stars of Lupus. Zenche, consisting of a triangle of stars (probably 1 and 2 Lupi plus Sigma Librae), was a formation of battle chariots, while Congguan (Chi and probably Psi Lupi) was an army doctor. Together with an arsenal, Kulou, nearby in Centaurus, and other military-themed constellations to the north in Libra, this whole area conjures up a picture of troops massing for battle.

#### THE PHOENIX

A constellation representing the mythical bird that supposedly was reborn from its own ashes. It is the largest of the 12 constellations invented at the end of the 16th century by the Dutch navigators Pieter Dirkszoon Keyser and Frederick de Houtman. As with all the Keyser and de Houtman constellations it was first depicted on a globe by Petrus Plancius in 1598 and first appeared in print on the 1603 Uranometria atlas of Johann Bayer. The constellation lies near the southern end of the river Eridanus, and its brightest star, Alpha Phoenicis, is of magnitude 2.4.

The phoenix supposedly resembled a large eagle with scarlet, blue, purple, and gold plumage. Ovid in his *Metamorphoses* tells us that the phoenix lived for 500 years, eating the gum of incense and the sap of balsam. At the end of its allotted span the bird built itself a nest from cinnamon bark and incense among the topmost branches of a palm tree, ending its life on the fragrantly scented nest. A baby phoenix was born from its father's body. The nest was both the tomb of one phoenix and the cradle of the next. When it was old enough to bear the weight, the young phoenix lifted the nest from the tree and carried it to the temple of Hyperion, the Titan who was the father of the Sun god. The death and rebirth of the phoenix has been seen as symbolizing the daily rising and setting of the Sun.

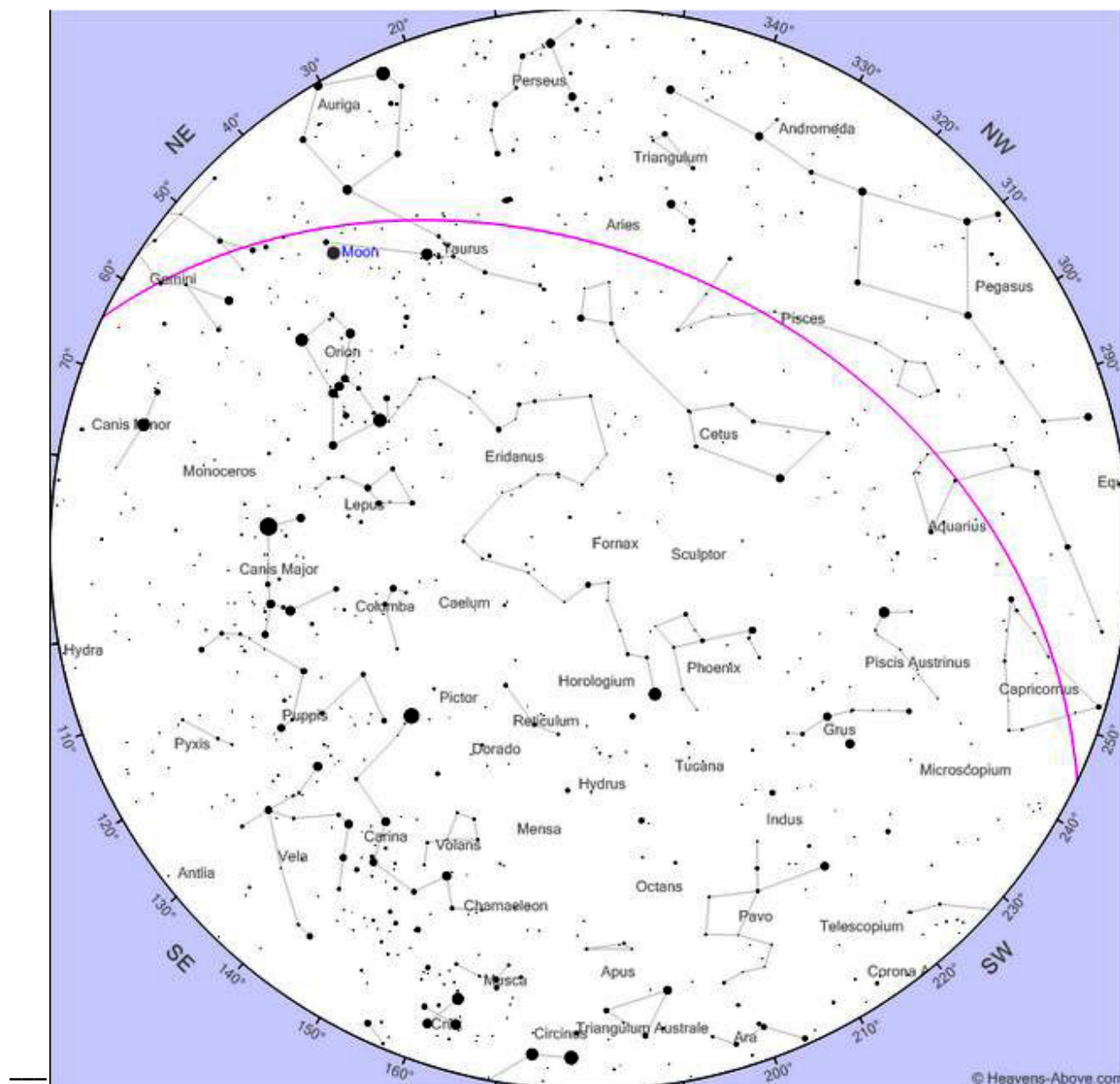
Why name a constellation after the phoenix when, bar Triangulum Australe, all the other 12 southern inventions of Keyser and de Houtman were based on real living creatures? Perhaps the answer lies with the exotic bird of paradise. When the first colourful specimens, all dead, arrived in Europe in the 16th century, speculation arose that they might be the mythical phoenix, or at least relatives thereof. The Portuguese called them *passaros da sol*, birds of the Sun. The 16th-century French naturalist Pierre Belon believed in the possible existence of the phoenix and even gave it an entry in his 1555 book *L'histoire de la nature des oyseaux*. So there was good authority for the reality of such a bird at the end of the 16th century, when the constellation first entered the sky, even though neither it nor the bird of paradise had yet been seen alive.

#### *Chinese associations*

When the ancient Chinese constellations were formed 2,000 or more years ago, the star we know as Alpha Phoenicis was the brightest member of a constellation called Bakui, representing a net for catching birds. Bakui extended northwards into Sculptor, but as precession carried this part of the sky beneath the horizon the constellation was moved farther north into Cetus.



4.



# **MORNING SKY 16 September at 05<sup>h</sup>00**

(The magenta line denotes the ecliptic)

Date	Time	Item
8	05h00	<b>Moon</b> at perigee (358,400 km)
9	03h00	<b>Full Moon</b>
11	02h00	<b>Moon</b> near <b>Uranus</b> (no occultation)
15	03h00	<b>Moon</b> near <b>Aldebaran</b>
16	04h00	Last Quarter <b>Moon</b>
	07h00	<b>Moon</b> furthest north (+18.6°)

21	05h20	<b>Moon</b> occults <b>omicron Leonis</b> (mag 3.5, quadruple) – bright limb event, not easy to see!
23	04h00	Equinox (start of spring)
24	08h00	<b>New Moon</b>
26	04h00	<b>Moon</b> near <b>Spica</b>
26		<b>Mars</b> near <b>rho Ophiuchi Nebula</b> (mag 4.5)
28	06h00	<b>Moon</b> near <b>Saturn</b> (no occultation)

## 5. THE SOLAR SYSTEM:

**Venus** is very low in the morning sky and closing on the **Sun** as the month advances. But **Jupiter**, the undisputed king of the planets, is there before sunrise, advancing westwards through September with his entourage of Galilean moons.

## 6. DEEP SKY:

The Big Dog, **Canis Major**, and the Little Dog, **Canis Minor**, flanking **Monoceros** (the Unicorn) follow faithfully behind the Hunter before sunrise. Anticipating summer, the beautiful asterisms, **Pleiades** and **Hyades**, are rising in the north-east.

## 7. THE SUN AND PLANETS

<i>Sun &amp; Planets</i>	<i>Month:</i>	<i>September 2014</i>	<i>1<sup>st</sup></i>	<i>30<sup>th</sup></i>
Sun Constellation: Leo - Virgo Length of day: 11:23 to 12:24		Rises:	07:02	06:22
		Transits:	12:44	12:33
		Sets:	18:25	18:46
Mercury Constellation: Virgo Magnitude: -0.2 to +0.5		Rises:	07:56	07:11
		Transits:	13:57	13:56
		Sets:	19:59	20:42
Venus Constellation: Leo - Virgo Magnitude: -3.9		Rises:	06:28	06:11
		Transits:	11:51	12:13
		Sets:	17:14	18:14
Mars Constellation: Libra - Ophiuchus Magnitude +0.6 to +0.8		Rises:	10:19	09:31
		Transits:	17:17	16:44
		Sets:	00:17	23:57
Jupiter Constellation: Cancer Magnitude: -1.8 to -1.9		Rises:	05:42	04:03
		Transits:	10:53	09:18
		Sets:	16:04	14:33
Saturn Constellation: Libra Magnitude: +0.6		Rises:	10:21	08:30
		Transits:	17:06	15:17
		Sets:	23:50	22:04
Uranus Constellation: Pisces Magnitude: +5.7		Rises:	21:12	19:09
		Transits:	03:03	01:01
		Sets:	08:49	06:48
Neptune Constellation: Aquarius Magnitude: +7.8		Rises:	18:03	16:01
		Transits:	00:36	22:23
		Sets:	07:05	05:05

## 8. METEOR SHOWERS

No meteor showers are predicted for September.

compiled by: Peter Harvey  
e-mail: [petermh@hermanus.co.za](mailto:petermh@hermanus.co.za)  
Tel: 028 316 3486

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