



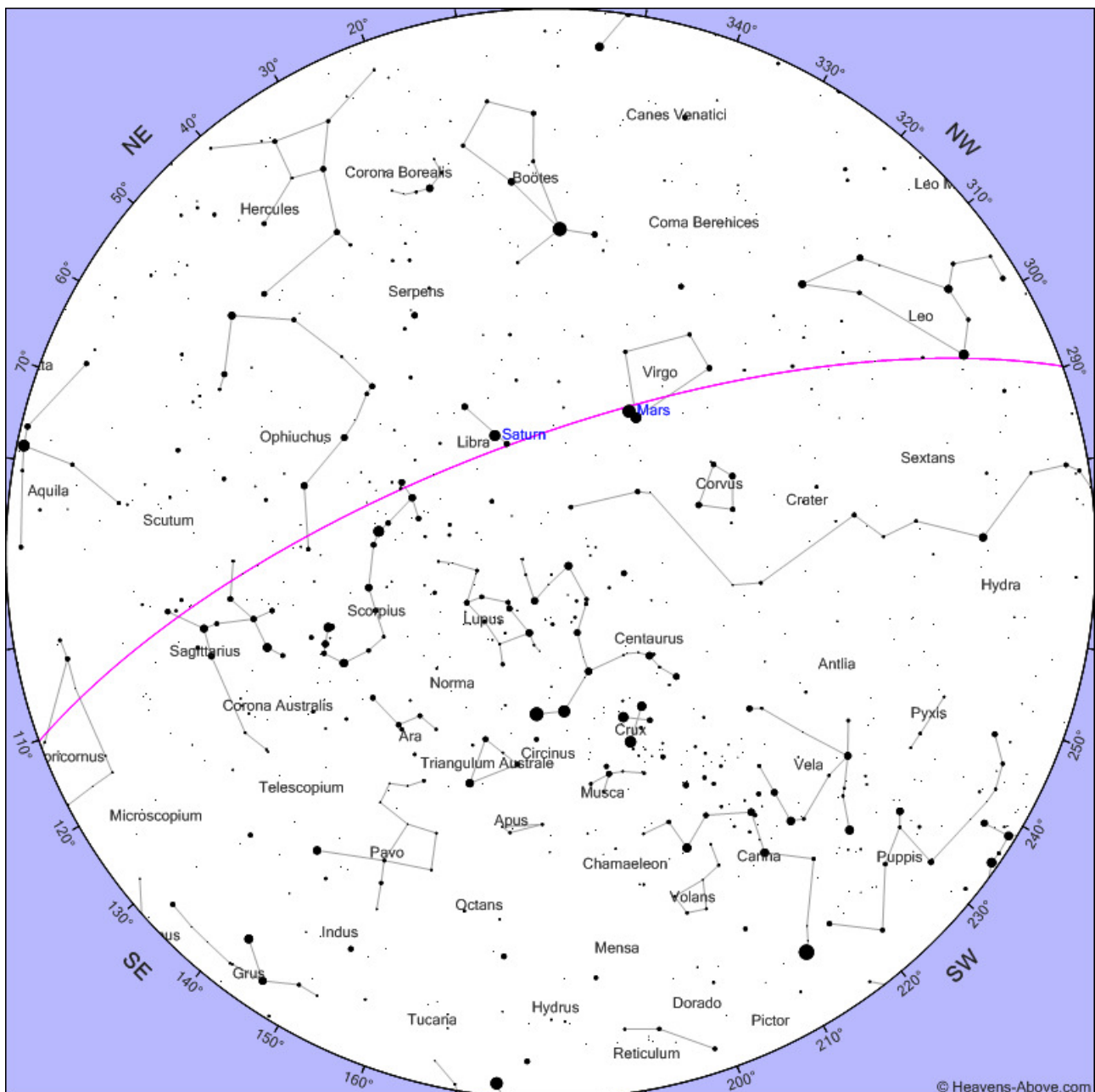
HERMANUS ASTRONOMY CENTRE

THE SKY THIS MONTH : JULY 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 and from the download directory, then to highlight them and then to click on preview, once in the preview menu just press print!

1. Evening Sky.



Evening sky highlights from the Sky Guide are the following:

Date and Time	Item
13 July 21h00	Mars near Spica
13 July 23h40	Moon near Messier 72 Globular Cluster

2. Morning Sky



Morning sky highlights from the Sky Guide are the following:

Date and Time	Item
01 July 06:30	Venus near Aldebaran
04 July 04:00	Earth at aphelion

3. The Moon.

Phases of the Moon:

JUNE	Time	Event
05 July	13:00	First Quarter
12 July	13:25	Full Moon
19 July	04:00	Last Quarter
27 July	00:00	New Moon
Lunar Events:		
30 June	20:00	the moon will be at apogee
10 July	19:00	the moon will be at its maximum southerly declination
13 July	10:00	the moon will be at perigee
23 July	18:00	the moon will be at its maximum northerly declination
28 July	05:00	the moon will be at apogee

4. Lunar Occultations. Saturn on 08th July, starting at 05:00 and emerging again at 05:50, but is unfortunately below our horizon and not visible.

5. Eclipses. None predicted.

6. The Sun and Planets

Sun & Planets	Month:	July 2014	1st	31st
Sun		Rises:	07:50	07:37
Constellation:	Gemini	Transits:	12:47	12:49
Magnitude:		Sets:	17:43	18:02
Mercury		Rises:	06:36	07:13
Constellation:	Taurus	Transits:	11:41	12:12
Magnitude:	+2.3	Sets:	16:46	17:10
Venus		Rises:	05:35	06:19
Constellation:	Taurus	Transits:	10:36	11:14
Magnitude:	-3.7	Sets:	15:37	16:08
Mars		Rises:	12:51	11:30
Constellation:	Virgo	Transits:	19:12	18:07
Magnitude:	+0.1	Sets:	01:34	00:45
Jupiter		Rises:	09:02	07:27
Constellation:	Gemini	Transits:	13:59	12:29
Magnitude:	-1.6	Sets:	18:57	17:31
Saturn		Rises:	14:24	12:25
Constellation:	Libra	Transits:	21:04	19:05
Magnitude:	+1.0	Sets:	03:48	01:49
Uranus		Rises:	01:23	23:22
Constellation:	Pisces	Transits:	07:07	05:09
Magnitude:	+5.9	Sets:	12:50	10:52
Neptune		Rises:	22:14	20:14
Constellation:	Aquarius	Transits:	04:44	02:44
Magnitude:	+7.90	Sets:	11:09	09:10

7. Meteor Showers. The following meteor showers are predicted in the Sky Guide for May:

Name	Date & Time of Max	Radiant R.A.	Dec	ZHR	Observing Prospect
Pisces Australids	28 July 21:30-05:00	22 ^h 40 ^m	-30°	5	Favourable
S. δ Aquariids	28 July 22:00-05:00	22 ^h 36 ^m	-16°	25	Favourable
α Capricornids	30 July 20:00-04:00	20 ^h 28 ^m	-10°	5	Favourable

CONSTELLATION FOR THE MONTH

8. This month's constellation is Lupus (the wolf).

According to Ian Ridpath, "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." For more see <http://www.ianridpath.com/startales/lupus.htm> .

Deep-sky objects

From [Wikipedia](#): "Towards the north of the constellation are globular clusters NGC 5824 and NGC 5986, and close by the dark nebula B 228. To the south are two open clusters, NGC 5822 and NGC 5749, as well as globular cluster NGC 5927 on the eastern border with Norma. On the western border are two spiral galaxies and the Wolf-Rayet planetary nebula IC 4406, containing some of the hottest stars in existence. IC 4406, also called the Retina Nebula, is a cylindrical nebula at a distance of 5,000 light-years. It has dust lanes throughout its center.[3] Another planetary nebula, NGC 5882, is towards the centre of the constellation. The transiting exoplanet Lupus-TR-3b lies in this constellation. The historic supernova SN 1006 is described by various sources as appearing on April 30 to May 1, 1006, in the constellation of Lupus. SO 274-1 is a spiral galaxy seen from edge-on that requires an amateur telescope with at least 12 inches of aperture to view. It can be found by using Lambda Lupi and Mu Lupi as markers, and can only be seen under very dark skies. It is 9 arcminutes by 0.7 arcminutes with a small, elliptical nucleus."

From Hubblesite: "The donut of material confines the intense radiation coming from the remnant of the dying star. Gas on the inside of the donut is ionized by light from the central star and glows. Light from oxygen atoms is rendered blue in this image; hydrogen is shown as green, and nitrogen as red. The range of color in the final image shows the differences in concentration of these three gases in the nebula. Unseen in the Hubble image is a larger zone of neutral gas that is not emitting visible light, but which can be seen by radio telescopes. One of the most interesting features of IC 4406 is the irregular lattice of dark lanes that criss-cross the center of the nebula. These lanes are about 160 astronomical units wide (1 astronomical unit is the distance between the Earth and Sun). They are located right at the boundary between the hot glowing gas that produces the visual light imaged here and the neutral gas seen with radio telescopes. We see the lanes in silhouette because they have a density of dust and gas that is a thousand times higher than the rest of the nebula. The dust lanes are like a rather open mesh veil that has been wrapped around the bright donut. The fate of these dense knots of material is unknown. Will they survive the nebula's expansion and become dark denizens of the space between the stars or simply dissipate?"



Read more in [http://en.wikipedia.org/wiki/Lupus\(constellation\)](http://en.wikipedia.org/wiki/Lupus(constellation))

DEEP SKY OBJECT FOR THE MONTH

9. Wolf-Rayet planetary nebula IC 4406

From Wikipedia, the free encyclopaedia (http://en.wikipedia.org/wiki/IC_4406) :-

“IC 4406 is a planetary nebula near the western border of the constellation Lupus, the Wolf. It has dust clouds and has the shape of a torus. Despite this, it looks somewhat rectangular because it is seen from its side as viewed from Earth, almost in the plane of its equator.

Structure

IC 4406 is bipolar and appears to be a prolate spheroid with strong concentrations of material in its equator. This kind of structure is a natural product of a bipolar model. The knots of IC 4406 have a "lacy" appearance and have no ordered symmetry towards the central star. The knots have no tails. None of the features have bright edges.”



This image is from Hubblesite

(see <http://hubblesite.org/newscenter/archive/releases/2002/14/image/a/>).

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