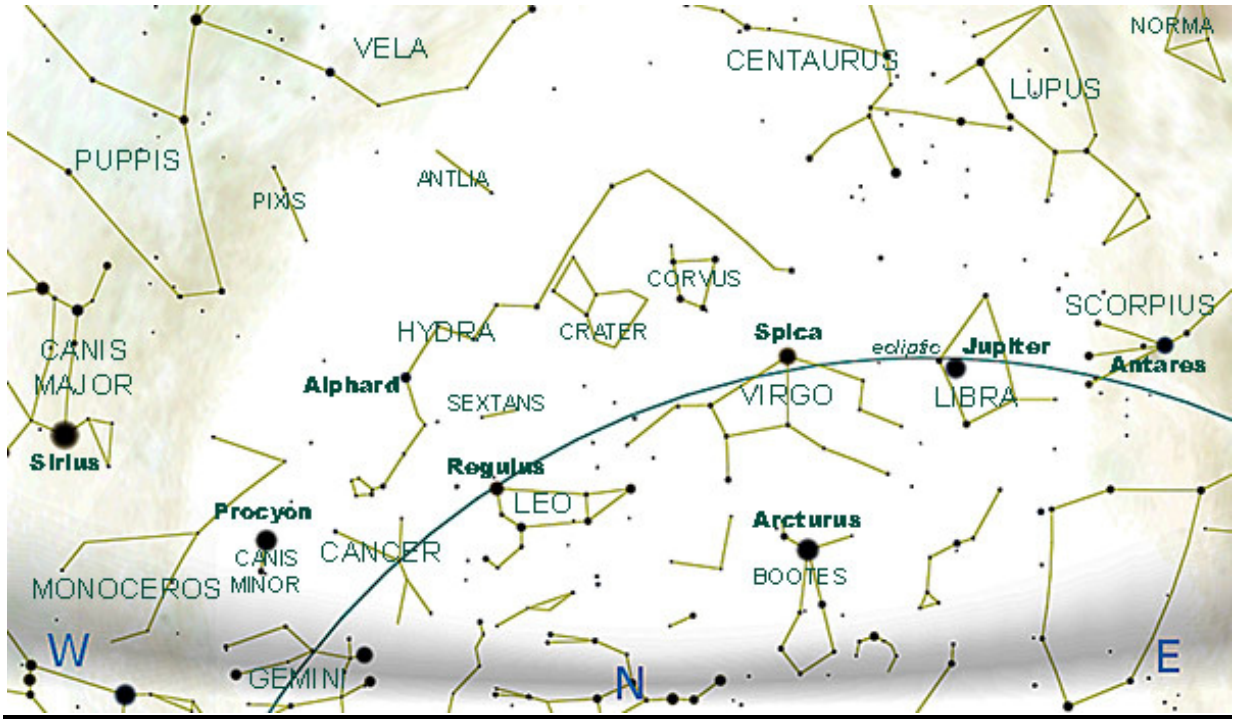
Hermanus
Astronomy Centre

Sky Maps

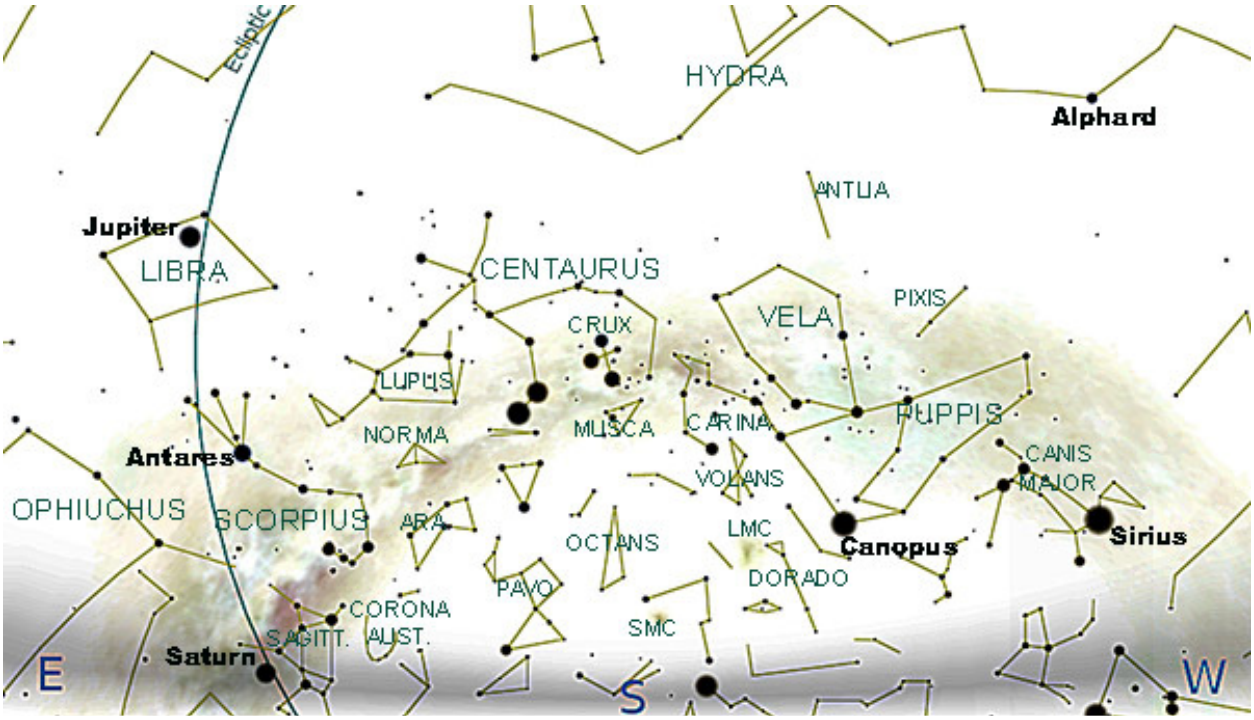
MAY 2018

1. SKY CHARTS

EVENING SKY MID MAY at 21h00 (NORTH DOWN)



EVENING SKY MID MAY at 21h00 (SOUTH DOWN)



PLEASE NOTE: All events predicted below are as observed from **Hermanus, Western Cape, South Africa**

2. THE SOLAR SYSTEM

PLANET VISIBILITY

Mercury	Low in the east before sunrise but moving too close to the Sun for observation
Venus	the "Evening Star" after sunset
Mars	Morning
Jupiter	Visible throughout the night
Saturn	Initially visible in the morning becoming visible throughout the night
Uranus	Low in the east before sunrise
Neptune	Morning
Pluto	Initially visible in the morning becoming visible throughout the night

Sun & Planets	*MAY 2018*		*1st*	*31st*
Sun Constellation Length of day	Aries to Taurus 10h43 to 10h02	Rises: Transits: Sets:	07h18 12h40 18h02	07h40 12h41 17h42
Mercury phase Constellation Magnitude	Φ 8" to 5" 46% to 96% Cetus to Taurus +4.0 to -1.5	Rises: Transits: Sets:	05h08 11h03 16h57	17h06 12h12 1717
Venus phase Constellation Magnitude	Φ 12" to 13" 88% to 81% Taurus to Gemini -3.9 to 4.0	Rises: Transits: Sets:	09h33 14h31 19h29	10h19 15h10 20h01
Mars phase Constellation Magnitude	Φ 11" to 15" 88% to 91% Sagittarius to Capricornus -0.4 to -1.2	Rises: Transits: Sets:	22h39 05h50 12h58	21h34 04h42 11h47
Jupiter Constellation Magnitude	Φ 45" to 44" Libra -2.5	Rises: Transits: Sets:	18h25 01h17 08h05	16h15 04h42 05h49
Saturn Constellation Magnitude	Φ 17" to 18" Sagittarius +0.4 to +0.2	Rises: Transits: Sets:	21h36 04h46 11h53	19h32 02h43 09h50
Uranus Constellation Magnitude	3" Aries +5.9	Rises: Transits: Sets:	06h23 11h56 17h28	04h33 10h04 15h34
Neptune Constellation Magnitude	Φ 2" Aquarius +7.9	Rises: Transits: Sets:	02h57 09h16 15h35	01h01 07h20 13h39
Pluto Constellation Magnitude	Sagittarius 14.2	Rises: Transits: Sets:	22h31 05h39 12h43	20h31 03h40 10h44

Notes to the table above on the following page ...

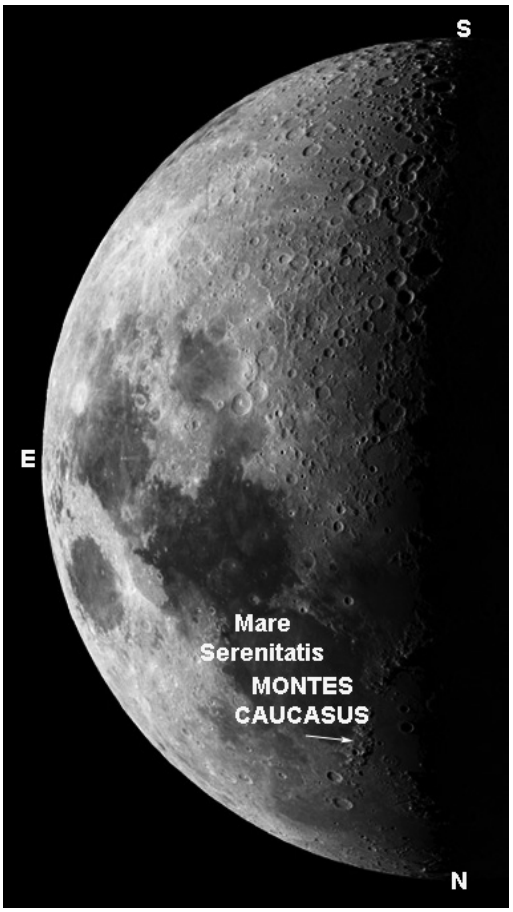
Phase: In a telescope, the inner planets (Mercury, Venus and Mars) appear to us in phases, depending on the angle of the Sun's illumination, as does the Moon. The **angular diameter** (φ) is given in arc seconds (“). This is the apparent size of the object as we see it from Earth. To illustrate this point, consider the average binoculars through which we see about 7º of sky. Therefore, for example, Mars at 19” on 1st May would cover approximately 1/1300th of the field of view.

Magnitude: we are accustomed to hearing stars described in terms of 'magnitude', for example Antares (in Scorpius) at +1.05 and the planet Jupiter, at magnitude -1.9. The latter is considerably brighter than Antares as the scale is 'inverse'; the brighter the object, the lower the number. A 'good' human eye on a clear night can see down to a magnitude of about +6.

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 to the horizon directly south.

THE MOON

Lunar Highlight (information from the 2018 *Sky Guide Africa South):*



Montes Caucasus

Type: a substantial mountain range intersected by numerous deep valleys.

Size: extends for some 536 Km reaching a high of 3.6 Km

Notes: readily visible in 10 X binoculars. Named after the Eurasian mount system by the 18th century German selenographer Johann Mädler.

Best seen: six days after **New Moon** (6th May) and five days after **Full Moon** (20th May).

Location: Marks the boundary between Mare Serenitatis and Mare Imbrium**.**

Eclipses (visible from Southern Africa):
No eclipses, solar or lunar, are predicted for this month.

The only meteor showers predicted for this month are the η Aquariids

METEOR SHOWERS

The only meteor showers predicted for this month are the **η Aquariids**. As the observing prospects are given as 'poor' the details are not included.

3. HIGHLIGHTS FROM THE SKY GUIDE
(viewed from Hermanus)

Date	Time	Item
4		**Moon** near **Saturn**
		Comet **37P/Forbes** at perihelion (period 6.4 years)
5		**Moon** furthest south (-20.6°)
		Moon near Pluto
6		**Moon** at apogee (404 457 Km)
		Moon near **Mars**
7		Comet **143P/Kowal-Mrkos** at perihelion (period 8.9 years)
8	04h09	**Last quarter Moon**
		Vesta stationary
9		**Jupiter** at opposition
10		**Moon** near **Neptune**
13		**Moon** and **Mercury** (at greatest latitude south) both near **Uranus**
15	13h48	**New Moon**
		Venus at perihelion
16		**Moon** near **Aldebaran**
17	23h07	**Moon** at perigee (363 776 Km)
		Moon near **Venus**
18		*RIGHTS FARM STAR PARTY* [1]
		Moon furthest north (+20.7º)
19		Comet **66P/du Toit** at perihelion (period 14.9 years)
22	05h49	**First quarter Moon**
	04h55	**Moon** passes 1º 40' north of **Regulus**
23		Comet **107/P Wilson-Harrington** at perihelion (period 4.3 years)
		Start of southern hemisphere spring on **Mars** (89.7 days)
25		*INTERNATIONAL TOWEL DAY* [2]
27	22h10	**Moon** passes 4º 10' north-east of **Jupiter**
29	16h20	**Full Moon**
31		Comet **164P/Christensen** at perihelion (period 7.0 years)

[1] The *Rights Farm Star Party* will be held from 18 to 20 May near the Willem Pretorius Game Reserve between Senekal and Ventersburg. Contact Wessel du Preez 082 921 4304.

[2] *TOWEL DAY* is celebrated every year on 25 May as a tribute to the author Douglas Adams by his fans. On this day, fans openly carry a towel with them, as described in Adams' *The Hitchhiker's Guide to the Galaxy* or share their folded animal towels to demonstrate their appreciation for the books and the author. The commemoration was first held 25 May 2001, two weeks after Adams' death on 11 May.

4. STARGAZING

SUGGESTED OBSERVATION DAYS FOR MAY:

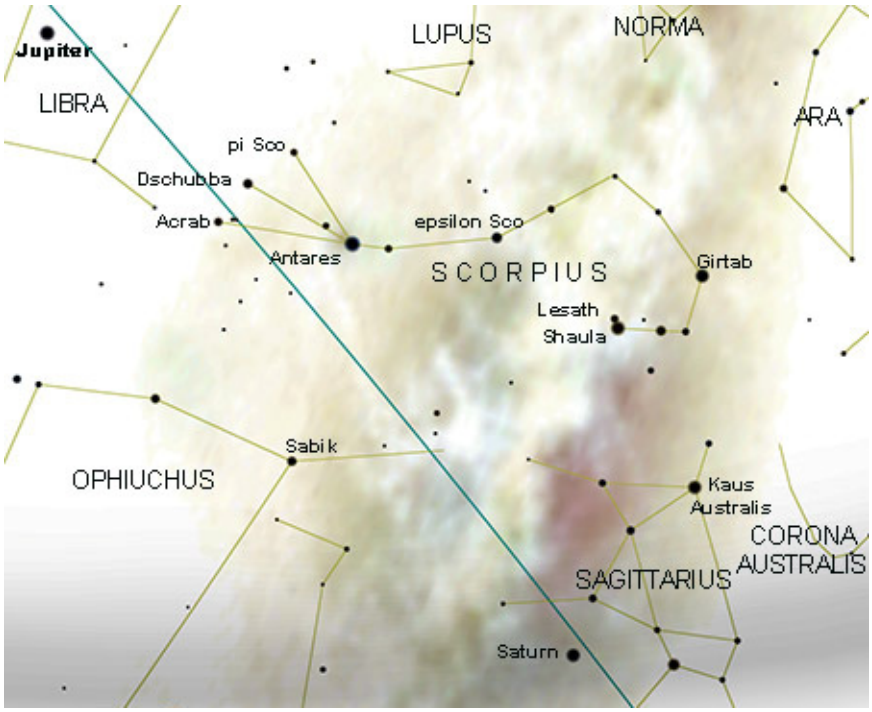
Unless *specifically targeting the moon*, may I suggest the most convenient dates to plan evening stargazing in **May** are **4th** (moonrise 21h32) to **18th** (moonset 20h53).

The next club stargazing evening is planned for 18th or 19th May, ***weather dependent!*** *Please see the calendar of events on our website for updates:*

http://www.hermanusastronomy.co.za

NO 'SCOPE REQUIRED (or Getting to Know The Constellations)

I offer here some more tips for the less experienced enthusiast on getting to know the constellations and identifying some of the lesser-known features of the night sky. *Toes south-east!*



Welcome back, glorious **Scorpius**! Arguably the best-named constellation.

Well-known **Antares** is the heart of the scorpion with **Acrab** and **pi Sco** depicting the claws and **Dschubba** the head. Along the body we find **epsilon Sco** and in the tail, **Girtab.** Finally, the deadly sting is represented by **Shaula** and **Lesath.**

Surrounding Scorpius are constellations **Libra, Lupus, Norma, Ara, Corona Australis, Sagittarius** and **Ophiuchus.**

Some basic facts about the above stars:

	magnitude	*distance*	*description*		*magnitude*	*distance*	*description*
Antares	+1.05	554 LY	Pulsating variable	**ε Sco**	+2.25	64 LY	Star
Acrab	+2.6	530 LY	Double	**Girtab**	+1.85	272 LY	Double
π Sco	+2.85	586 LY	Eclipsing binary	**Shaula**	+1.6	571 LY	Variable
Dschubba	+2.35	402 LY	Eruptive variable	**Lesath**	+2.7	576 LY	Star

Incidentally, the very beautiful **Corona Australis**, just to the right of **Sagittarius**, though appearing as a close-knit family, are in fact widely dispersed, ranging from less than 60 to over 600 light years distant.

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

Scorpius
The scorpion

Genitive:Scorpii
Abbreviation:Sco
Size ranking:33rd
Origin:One of the 48 Greek constellations listed by Ptolemy in the Almagest
Greek name: Σκορπίος (Skorpios)

'There is a certain place where the scorpion with his tail and curving claws sprawls across two signs of the zodiac', wrote Ovid in his Metamorphoses. He was referring to the ancient Greek version of Scorpius, which was much larger than the constellation we know today. The Greek scorpion was in two halves: one half, called Σκορπίος (Skorpios), contained its body and sting, while the front half comprised the claws. The Greeks called this front half Χηλαί (Chelae), which means 'claws'. In the first century BC the Romans made the claws into a separate constellation, Libra, the balance.

In mythology, this is the scorpion that stung Orion the hunter to death, although accounts differ as to the exact circumstances. Eratosthenes offers two versions. Under his description of Scorpius he says that Orion tried to ravish Artemis, the hunting goddess, and that she sent the scorpion to sting him, an account that is supported by Aratus. But in his entry on Orion, Eratosthenes says that the Earth sent the scorpion to sting Orion after he had boasted that he could kill any wild beast. Hyginus also gives both stories. Aratus says that the death of Orion happened on the island of Chios, but Eratosthenes and Hyginus place it in Crete.

In either case, the moral is that Orion suffers retribution for his hubris. This seems to be one of the oldest of Greek myths and the origin may lie in the sky itself, since the two constellations are placed opposite each other so that Orion sets as his conqueror the scorpion rises. But the constellation is much older than the Greeks, for the Sumerians knew it as GIR-TAB, the scorpion, over 5000 years ago.

Scorpius clearly resembles a scorpion, particularly the curving line of stars that form its tail with its sting raised to strike. Old star maps show the lower left leg and foot of Ophiuchus, to the north, awkwardly overlapping the scorpion's body. Incidentally, Scorpius is the modern astronomical name for the constellation; Scorpio is the old name, now used only by astrologers. The name in Greek was Σκορπίος, as used by Ptolemy in the Almagest.

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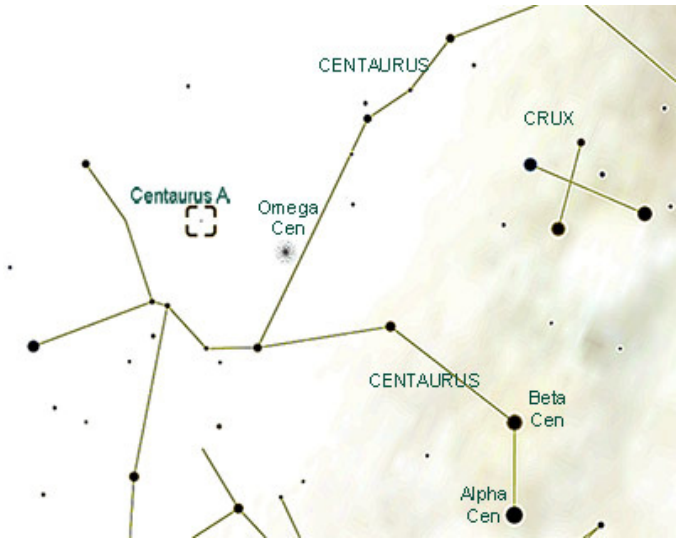
5. DEEP SKY HIGHLIGHT (from the Sky Guide Africa South 2018)



The Hamburger Galaxy (Centaurus A, NGC 5128)

RA 08h54m27s, Dec -43º 06' 41"

(extracted from the Sky Guide)

*Less than 5º north of the splendid naked-eye globular cluster **omega Centauri** lies this facinating target, also catalogued as NGC 5128.*

Binoculars show it as an elongated glowing patch, an easy sweep from ω Cen. Large binoculars or a small telescope reveal two

elongated, nebulous patches separated by a thin dark lane. Larger instruments reveal several stars scattered across it as well as tantalising structural details along the edges of the two unevenly broad patches.

NGC 5128 was first seen by Scottish astronomer James Dunlop in 1826, observing from Australia. John Herschel, at the Cape in the 1830s, called it "a most wonderful object" and recorded an "eliptical figure, cut away in the middle by a perfectly definite straight cut."

It has since been the subject of intense study and is thought to be the result of a powerful merger between a small gas-rich spiral galaxy and a giant eliptical galaxy. It lies some 12 million light years away.

Please keep in touch...

Don't forget to have a look at our excellent website, edited by Derek Duckitt.
http://www.hermanusastronomy.co.za/

Also...

ASSA website http://assa.saao.ac.za
ASSA Deep-Sky Section
Whatsapp chat group: [074 100 7237]
Official Big 5 of the African Sky web page
Official Big 5 Facebook group
ASSA Deep-Sky Section mailing list

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!
You can find us on Facebook, Twitter, the ASSA Info mailing list and the ASSA Discussion mailing list.

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