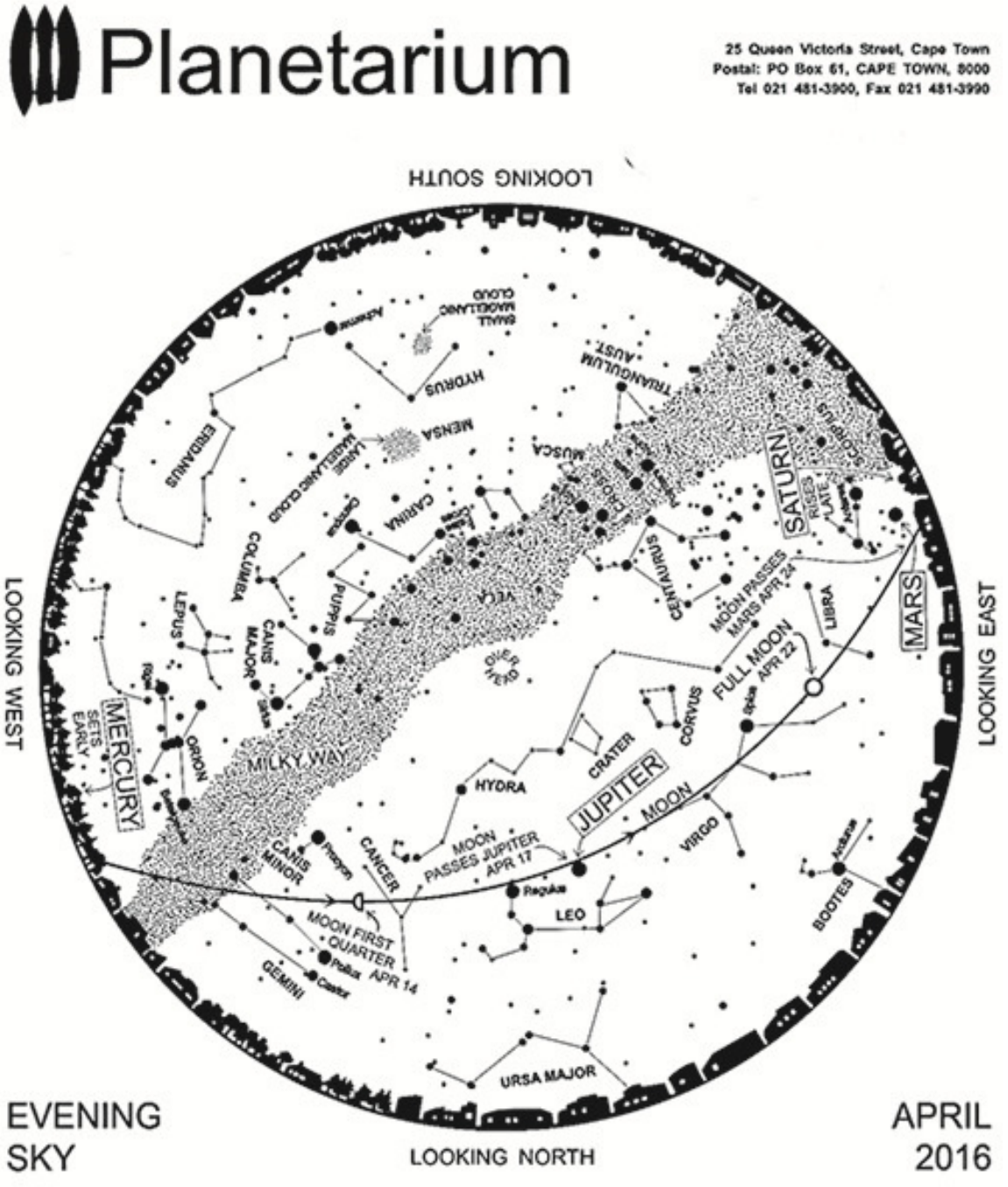
HERMANUS ASTRONOMY CENTRE

THE SKY THIS MONTH : APRIL 2016

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

1. SKY MAPS

EVENING SKY MID APRIL at 21h00



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

2. THE SOLAR SYSTEM

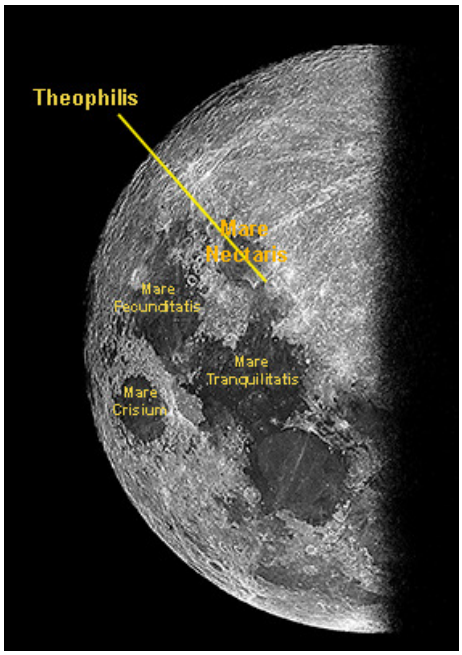
Sun & Planets	*APRIL 2016*		*1st*	*30th*
Sun		Rises:	06h56	07h18
Constellation:	Pisces to Aries	Transits:	12h47	12h41
Length of day	11h42 to 10h44	Sets:	18h38	18h03
Mercury	phase 93% to 7% , ϕ 11"	Rises:	07h39	08h28
Constellation	Pisces to Aries	Transits:	13h21	13h30
Magnitude:	-1.5 to +2.8	Sets:	19h01	18h32
Venus	phase 96% to 99%, ϕ 10"	Rises:	05h33	06h29
Constellation:	Aquarius to Aries	Transits:	11h46	12h04
Magnitude:	-3.9	Sets:	17h58	17h37
Mars	phase 93% to 98%, ϕ 12" to 16"	Rises:	21h22	19h25
Constellation:	Scorpius	Transits:	04h27	02h34
Magnitude	-0.6 to -1.5%	Sets:	11h29	09h39
Jupiter	ϕ 44" to 41"	Rises:	17h27	15h27
Constellation:	Leo	Transits:	23h09	21h08
Magnitude:	- 2.4 to -2.3	Sets:	04h56	02h52
Saturn	ϕ 17" to 18"	Rises:	21h59	20h01
Constellation:	Ophiuchus	Transits:	05h05	03h07
Magnitude:	+0.4 to +0.2	Sets:	12h08	10h09
Uranus	ϕ 3"	Rises:	07h35	05h49
Constellation:	Pisces	Transits:	13h17	11h29
Magnitude:	+ 5.9"	Sets:	18h59	17h09
Neptune	ϕ 2"	Rises:	04h28	05h49
Constellation:	Aquarius	Transits:	10h53	11h29
Magnitude:	+8.0 to +7.9	Sets:	17h17	17h09
Pluto		Rises:	00h16	22h18
Constellation:	Sagittarius	Transits:	07h18	05h24
Magnitude	+ 14.2	Sets:	14h20	12h27

Mercury	Visible low in the west after sunset
Venus	The Morning Star
Mars	Visible in the morning sky becoming visible throughout the night
Jupiter	Well placed for observation throughout the night
Saturn	Visible in the morning sky becoming visible throughout the night
Uranus	Early in the month it is too close to the sun but becomes visible low in the east before sunrise
Neptune	Visible in the morning sky
Pluto	Visible in the morning sky

THE MOON

The Sky Guide choice for the month is **Theophilus**.

Information extracted from the 2016 Sky Guide:



This deep crater, bordering on **Mare Nectaris**, has a central four-peak mountain rising 1 400 metres above the crater floor. The crater diameter is 104 km.

It is best seen 5 days after New Moon and 4 days after Full Moon.

Notes:

With Cyrillis and Catharina, they form a lovely trio of linked craters. Named after the 4th-century Egyptian Theophilus, 23rd pope of Alexandria.

This is a worthwhile target for binoculars.

ECLIPSES

No eclipses, solar or lunar, are visible from Hermanus in April 2016.

METEOR SHOWERS

Name	*Date & Time of Max*	*Duration*	*Radiant*	*ZHR*	*vel.*	*Observing Prospect*
δ Pavonids	6th April 02h00 to 04h30	11th March to 16th April	~ 7° south of +1.9 mag **Peacock** (α Pavonis)	5	59	New Moon
April Lyrids	22nd April 02h00 to 05h00	16th to 25th April	~ 7° SE of 0 mag **Vega** (a Lyra)	15	49	Full Moon
π Puppids	23rd April 19h00 to 23h00	15th to 28th April	~ 13° NE of **Canopus** (α Carinae)	<5	18	Unfavourable
η Aquarids	5th May 04h00 to 05h30	21st April to 12th May	~ 30° NNW of +1.1 mag **Fomalhaut** (α PsA)	60	65	New Moon

Key to the table above:
ZHR – zenithal hourly rate
vel. - velocity in km per second

For more details regarding meteor watching, please see the Sky Guide Africa South (SGAS), pp 86- 87

3. .APRIL HIGHLIGHTS FROM THE SKY GUIDE

Date	*Time*	*Item*
1		**Moon** to **Pluto** 3.3º south. Jovian double shadow.
		Moon to **Neptune** 1.8º south
6	10h30	**Moon** to **Venus** 0.7º south
7	13h24	New **Moon**
	19h36	**Moon** at perigee (357 200 km)
		Moon to **Uranus** 1.9º north
8		**Moon** to **Mercury** 5.0º north
9	23h28	**Uranus** at conjunction
		Moon to **Vesta** 0.02º south. Jovian double shadow
11	00h05	**Moon** to **Aldebaran** 0.4º south
12	14h12	**Moon** furthest north +18.3º. **Juri's** Night [1]
14	05h59	1st quarter **Moon**
17	02h46	**Moon** to **Regulus** 2.7º north
		Mars stationary
	06h42	**Moon** to **Jupiter** 2.4º north
	15h59	**Mercury** at greatest elongation 19.9º east.
		Pluto stationary
20	00h30	**Moon** occults **η Virginis** (the left shoulder of the Virgin)
21	18h05	**Moon** at apogee (406 400 km)
	14h30	**Moon** to **Spica** 4.8º south
22	07h24	Full **Moon**
23		Comet **PANSTARRS** (2013 x1) at perihelion
25	21h28	**Moon** to **Saturn** 3.7º south,
		Moon to **Mars** 4.8º south
27	06h44	**Moon** furthest south -18.4º
	18h33	**Mars** to **Antares** 4.9º north
		Juno at opposition
28	10h32	**Mercury** to **Pleiades** 6.5º south
		Moon to **Pluto 3.1º** south
29		**Mercury** stationary
30	05h29	Last quarter **Moon**

[1] **Yuri Alekseyevich Gagarin** (Russian: Ю́рий Алексе́евич Гага́рин[note 1]; IPA: [ˈjʉrʲɪj ɐlʲɪˈksʲejɪvʲɪtɕ gɐˈgarʲɪn]; 9 March 1934 – 27 March 1968) was a Russian Soviet pilot and cosmonaut. He was the first human to journey into outer space, when his Vostok spacecraft completed an orbit of the Earth on **12 April 1961**.

Gagarin became an international celebrity, and was awarded many medals and titles, including Hero of the Soviet Union, the nation's highest honour. Vostok 1 marked his only spaceflight, but he served as backup crew to the Soyuz 1 mission (which ended in a fatal crash). Gagarin later became deputy training director of the Cosmonaut Training Centre outside Moscow, which was later named after him. Gagarin died in 1968 when the MiG-15 training jet he was piloting crashed. The Yuri Gagarin Medal is awarded in his honour.

[From Wikipedia; hyperlinks intentionally left in place]

4. DEEP SKY

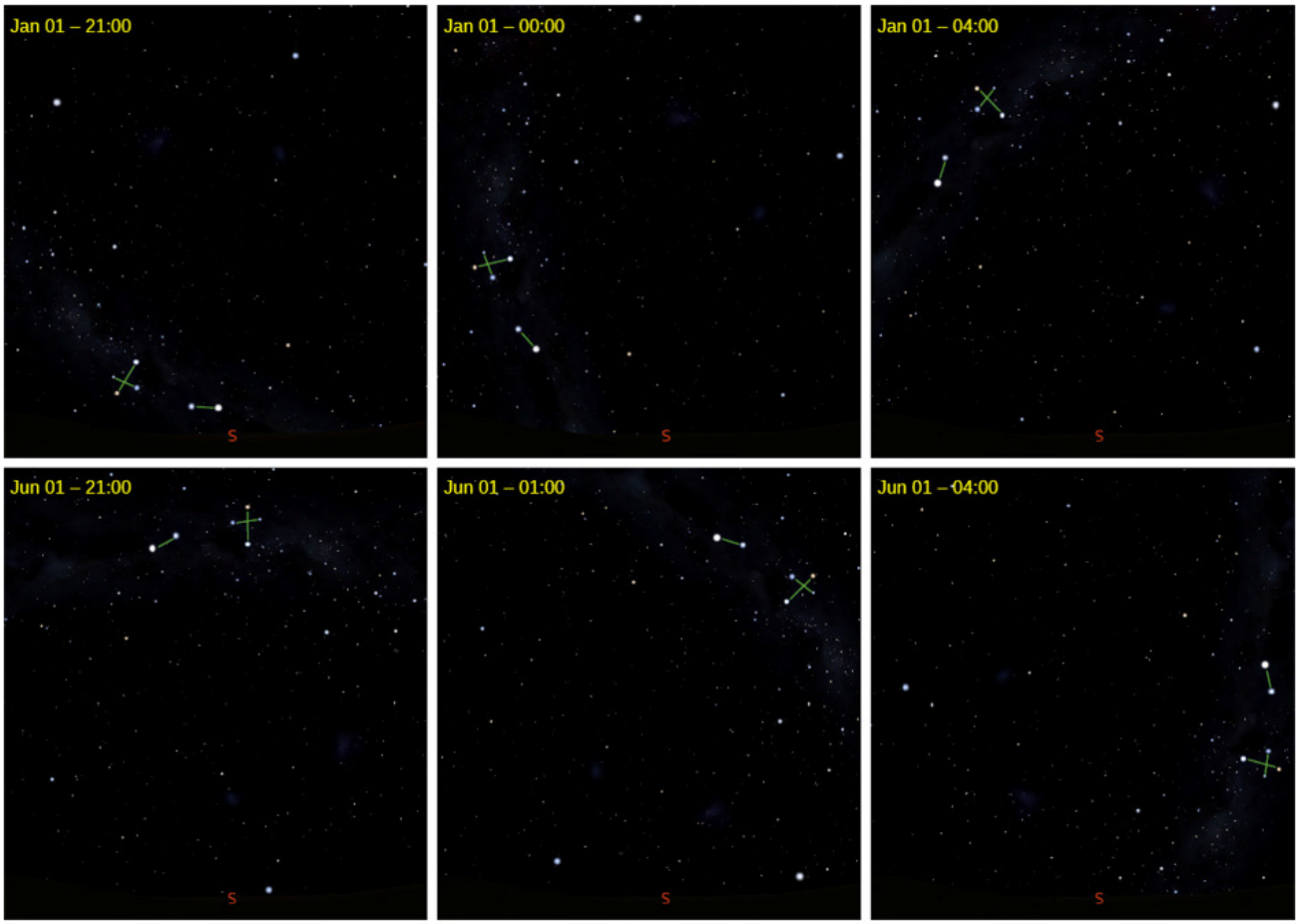
Don't forget that at this time of year we have, in the early evening sky, the **Pleiades** and the **Hyades** to the north-west of **Orion.** This wonderful pair of asterisms is always a beautiful sight with the naked eye and then, with binoculars and/or telescope, they provide splendid detail, particularly in the artistic composition of the Pleiades.

GALAXY OF THE MONTH – THE MILKY WAY (Part 2)

What are the Big 5?

The Big 5 of the African Sky are five celestial objects that represent the best specimens of each type of deep-sky class: the **Southern Pleiades** (an open star cluster), **omega Centauri** (a globular cluster), **η Carinae Nebula** (a bright nebula), **the Coal Sack** (a dark nebula) and **the Milky Way** (a galaxy).

Using the Southern Cross



By noting how the position of Crux (the Southern Cross) changes throughout a night, and over the course of a year, the location of the Big 5 can be determined quite easily.

How do I see the Big 5?

Once you know where the Big 5 are and when they are visible, decide on what equipment you would like to use. The Big 5 can be seen with the naked eye alone if you observe from a dark-sky site. Under these conditions the Milky Way in particular is a spectacular sight. If you will be observing under suburban skies you will need to use at least a pair of binoculars. A telescope will, of course, show the objects more easily, but the large size of the Milky Way means that most telescopes are too "powerful" – use binoculars instead.

How do I record the Big 5?

For each object, write a clear description of what you see. Imagine explaining the view to a blind friend who knows nothing about astronomy. Sometimes making a rough sketch, too, is a good idea. Also write up a few lines (like a diary entry or a blog post) telling about your observing experience. This journal is a great way to capture your thoughts and feelings of the moment: you'll enjoy reading it a few years down the line!

How do I report my observations?

Collect your observations of each object, add your observing journal entries (and sketches if you made them) and submit them to the ASSA Deep-Sky Section. The easiest way is to send an e-mail to the Section DIrector, Auke Slotegraaf. A great idea is to share your observations with other observers: you can post your notes on the Big 5 Facebook Group and on the ASSA Deep-Sky Section YahooGroup mailing list.

What happens after I submit my observations?

All reports will receive feedback from the ASSA Deep-Sky Section. If you've successfully observed the Big 5, your name will be listed on the ASSA website Big 5 Honour Roll. You will also be issued with a virtual sticker – a graphic that is created uniquely for you, officially hosted on the ASSA website, that you can link to and embed in online media. In addition, your descriptions and journal will be published on the ASSA Deep-Sky Section webpages for other observers to read and enjoy.

Keep in touch

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

Also...

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 also find us on Facebook, Twitter, the ASSA_Info mailing list and the ASSA_Discussion mailing list.

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