



NEWSLETTER APRIL 2022

NEXT MEETING

Internet meeting. *

Date and time: Wednesday 27 April 2022 at 19h00.

Programme: "Impacts" by Michael Poll

Chairman:

* You will receive an e-mail invite from Johan Smit around 18:30 to join the meeting.

Please join as quickly as possible.

Virtual observing evening chat

Date: Friday 22 April 2022. Time: 18h30. Johan Smit will open the meeting at around 18h15 and anyone who wishes to join the chat is welcome to join in the fun. Be seated in front of your computer at 18h15 with a glass of wine/beer/coffee.

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Astronomy related articles on the Internet

[NASA's exoplanet count surges past 5,000 | Science News](#)

The count was 4905 on 1 January 2022. The new count of 5000+ was on 22 March 2022. That's about 100 more in less than three months. And thousands more candidate exoplanets await confirmation. (The late astronomer Carl Sagan, whose field was planetary astronomy, would have been overjoyed at this news.)

[EarthSky | Double star orbits: New charts of Sirius and Albireo](#)

[EarthSky | Sirius B: How to see Sirius' companion](#)

Sirius, aka Alpha Canis Majoris and the "Dog Star" is the brightest star in the constellation Canis Major (= "Big Dog") as well as the brightest star in the sky. Its companion is a white dwarf star known as Sirius B, aka "The Pup". You can spot Sirius B with an amateur telescope.

[EarthSky | Odd radio circles perplex astronomers](#)

This is astronomy's newest mystery.

[Snapshot: ALMA spots moon-forming disk around distant exoplanet | Astronomy.com](#)

This is a first.

[EarthSky | How solar storms impact the global power grid](#)

Large streams of charged particles (mainly protons and electrons) are ejected from the Sun during violent activity on it. If these streams are directed towards Earth, they cause power outages and damage satellites in orbit around Earth.

[EarthSky | Artemis 1 on launch pad. Next up, the moon](#)

The goals of the Artemis mission are to establish a permanent base on the moon and to prepare for missions to Mars. The crew of Artemis 3 will go to the moon's south pole, where there are large amounts of water ice, and establish a base there. For the residents of the base, the ice will be a source of water and electrolysis of water will yield oxygen.

[Dark-Matter-Dominated Dwarf Galaxy Discovered: "Fossil of the Early Universe" - The Daily Galaxy](#)

This dwarf galaxy orbits our own galaxy, together with twenty-odd others.

[EarthSky | Whoa! Another asteroid whizzes past Earth hours after discovery](#)

It was between 2 and 4 meters in diameter and zipped past at a distance of only 8700 km from Earth.

[EarthSky | Most distant star yet seen spied by Hubble](#)

Astronomers have found the most distant star yet, thanks to a rare alignment with a lensing galaxy cluster. This star formed in the juvenile Universe just 900 million years after the Big Bang.

[These 24 Planets might be 'Better Places to Live than Earth' - Astrobiologists Say \(bibliotecapleyades.net\)](#)

Astronomy basics: Black holes

An introduction to the subject can be found at:

[Astronomy Learning Videos - Vanderbilt Museum](#)

Feature of the month: New planet detected around Proxima Centauri

A new planet was detected around Proxima Centauri, a red dwarf star that is the star closest to the Sun and that is only 4.2465 ± 0.0003 light-years away from the Sun. The planet's mass is about $\frac{1}{4}$ that of Earth. It is named Proxima d and is the lightest exoplanet ever detected using the radial velocity technique. This brings the number of exoplanets discovered around Proxima Centauri to three. Ω

[New planet detected around star closest to the Sun | ESO](#)

NOTICE BOARD

Are you looking up at the sky at night? You can also do it by day!

And if you are serious about it, get the book titled "The cloudspotter's guide. The science, history, and culture of clouds." by Gavin Pretor-Pinney.

[NASA GLOBE CLOUD GAZE — Zooniverse](#)

SF short film. [Sci-Fi Short Film "FTL" | DUST - YouTube](#)

The first civilization to emerge in the Galaxy. This is SF, but it gives insight into the early Universe and reminds us to care for Earth in an intelligent and responsible manner.

[The First Civilization to Emerge in the Galaxy - YouTube](#)

Stargazing with the MCSA. The Magaliesberg Section of the **M**ountain **C**lub of **S**outh **A**frica and the Pretoria Centre of the ASSA are holding a stargazing weekend at the Mountain Club's property at Wilgepoort near Bronkhorstspuit on 7 May 2022. Due to the distance from Pretoria (approximately 100 km) and the country roads over which we need to travel, it is suggested that the Centre members who wish to attend, make arrangements to sleep over on Saturday evening, either in your tents/caravans or in your vehicles. We will be fed on Saturday evening. Bring your own coffee making utensils and snacks for breakfast. The bottom line is that we need a fair number of telescopes, since there will be a large number of Mountain Club Members attending. They are keen to learn more about astronomy, since their activities take them to high and open spaces with dark skies and close to the stars.

Please contact Bosman Olivier for more information and to confirm your attendance.

bosman.olivier@gmail.com or 082 883 1869.

Pierre Lourens is a member of the Magaliesberg Section of the MCSA. For directions to Wilgepoort and the lock code at the gate, contact him at 072 2 071 403.

Old newsletters: All old newsletters from January 2004 onward are on our website. They contain a record of our Centre's activities as well as astronomical information.

Data base: Members are reminded that a data base of the books in our library is to be found on our website.

Astronomy related images, video clips and documentaries on the Internet

[Planet Hunters: Billions of Habitable Planets in the Universe | Free Documentary - Bing video](#)

[The Biggest Eruptions In Our Solar System \(Full Astronomy Documentary\) | Spark - Bing video](#)

[THE UNIVERSE - Out of Nothing: Infinity | SPACETIME - SCIENCE SHOW - Bing video](#)



Top: An artist's depiction of the surface of one of the seven exoplanets in the TRAPPIST-1 solar system. The central star is a red dwarf.



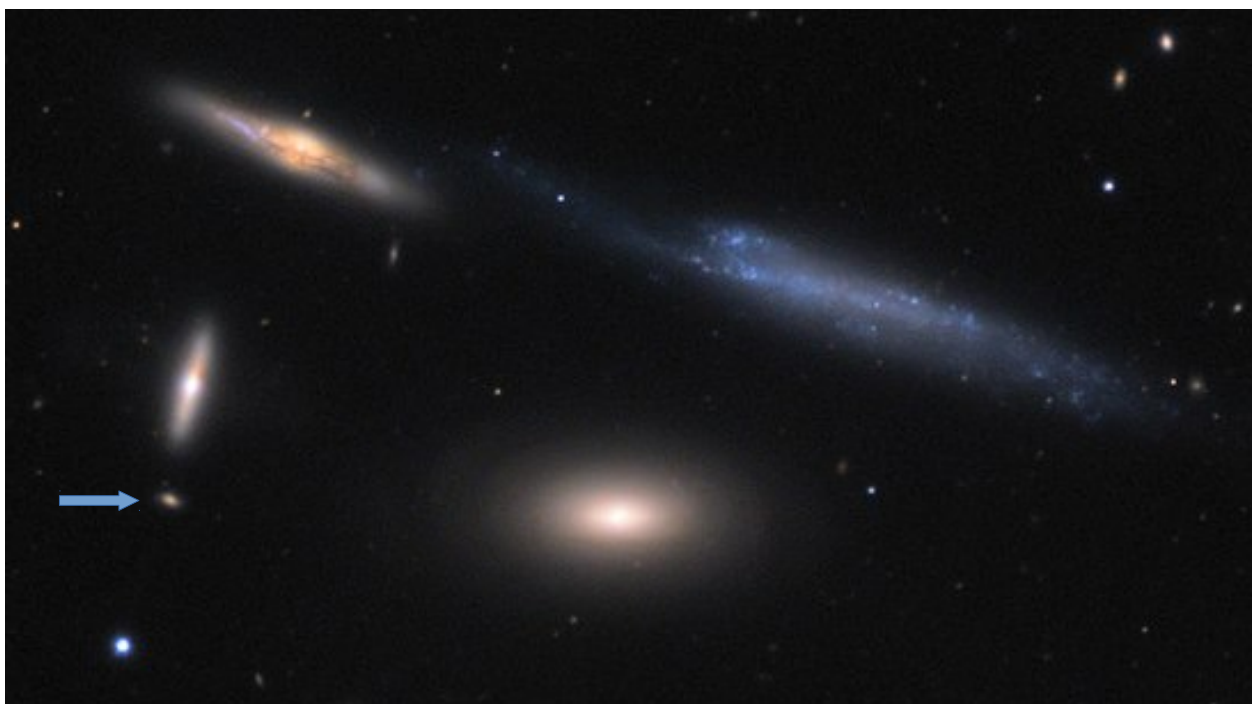
Immediately above: An artist's depiction of the surface of the moon of a ringed exoplanet. Note the (imaginary) amphibian vehicles of an (imaginary) intelligent species that has created a technological civilization.

Observing: Galaxy box in the Cosmos - by Magda Streicher

Among the stars can be found some of the most intriguing, quite outstanding objects. They may be very difficult to observe, but when seen, reveal to us the respect due to the great Cosmos. The constellation Coma Berenices is known as the place to which to go on a galactic hunt.

Four galaxies, appearing as two pairs and nicknamed “The Box”, are truly a very special sight. The galaxies, situated in the north-west corner of the constellation, form a nearly perfect rectangular shape, with the objects varying in brightness from magnitude 13.4 to the faintest member’s 14.4. NGC 4169 is the most obvious, an elliptical galaxy with a relatively high surface brightness. During my search for this special treat years ago I was able to see it relatively easily as a hazy roundish oval in perfect, very dark transparent skies. The group’s smallest member, NGC 4174, is situated at the southern end and pictures reveal a prominent compact nucleus. The northern NGC 4173 and north-eastern NGC 4175 edge-on pair are just faint streaks of light, and I had no success even glimpsing them. How incredible is the vastness of the Cosmos – complete star cities that unfold only in shades of elusive mists among the stars. Ω

OBJECT	TYPE	RA	DEC	MAG	SIZE
NGC 4169	Two galaxy pairs	20 h 12.0 m	+38° 21.3’	13.4 to 14.4	18’ x 13’



Galaxies NGC 4173 (top right), NGC 4169 (bottom), NGC 4174 (left) and NGC 4175 (top left), also known collectively as Hickson 61, "The Box" and Rose 10. Leda 213947 (also a galaxy) is indicated by the arrow. They are all located in constellation Coma Berenices.

Magda Streicher’s e-mail address: [magdalena@mweb.co.za](mailto:magdalenamweb.co.za)

Web links for the astronomy enthusiast

- ◆ **The website for all information about the ASSA and the ASSA Centres:**
<https://assa.sao.ac.za/>
- ◆ **ASSA Specialist Sections:**
 ASSA has various areas of interest. Join and participate!
<https://assa.sao.ac.za/sections/>
- ◆ **ASSA Publications to download and enjoy:**
 MNASSA: <https://www.mnassa.org.za/>
 Nightfall: <http://assa.sao.ac.za/sections/deep-sky/nightfall/>
 To receive as part of ASSA membership benefits - *Sky Guide*, the astronomical handbook for Southern Africa: <http://assa.sao.ac.za/about/publications/sky-guide/>
- ◆ **Mail Groups to join:**
 For general ASSA related information: <https://groups.io/g/ASSA-announce>
 For posting general items and discussion: <https://groups.io/g/ASSA-discussion>
- ◆ **Social Media to join and share:**
 Facebook: https://www.facebook.com/Astrosocsa/?_rdc=1&_rdr
 Youtube: https://www.youtube.com/channel/UCJ4b1fhmPvYTOsy15YP-_JA
 Twitter: <https://twitter.com/AstroSocSA>
- ◆ **More web links can be found on page 118 of “2022 Sky Guide Africa South”. Ω**

Pretoria Centre committee

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