



NEWSLETTER MARCH 2021

NEXT MEETING

Internet meeting. *

Date and time: Wednesday 24 March 2021 at 19h00.

Programme:

“My place in the incomprehensible Universe ” by André Buys.

Chairman: Danie Barnardo.

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

NO OBSERVING EVENING THIS MONTH

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Astronomy-related articles on the Internet

[Biggest asteroid to pass Earth in 2021 also one of the fastest | Astronomy Essentials | EarthSky](#) On March 21, when asteroid 2001 FO32 sweeps past Earth, it'll be moving at such a fast pace that observers using telescopes might be able to detect its drift in front of the stars in real time.

[When will Betelgeuse explode? | Brightest Stars | EarthSky](#) The red supergiant star was originally bright, then dimmed, then brightened, then dimmed, then brightened. It will eventually explode in a supernova, close enough to shine brightly during the day but far enough away so that Earth won't be in danger.

[A robot submarine could explore Titan's deepest sea | Space | EarthSky](#) Titan's lakes are filled with liquid methane and ethane. Kraken Mare, Titan's deepest and largest lake, is at least 300 meters deep near its centre and has a surface area of 500 000 square kilometers. What's down there?

[Farthest known object in the solar system identified | Space | EarthSky](#) The previous record holder was Farout - 124 AU from the Sun. Farfarout, recently discovered, is 132 AU from the Sun. (If an object further out is ever discovered, its name will have to be Farfarfarout. And the next one still further out will have to be)

[Swarm of black holes discovered | Space | EarthSky](#) Astronomers went looking for one medium-sized black hole in the centre of a globular cluster and instead found a whole swarm of smaller black holes.

[Spectacular fireball display in UK leads to rare meteorite recovery | Human World | EarthSky](#)

[What if Planet Nine is a baby black hole? | Live Science](#)

Feature of the month:

How the world came to understand black holes

The 2020 Nobel prize in physics went to Roger Penrose, Reinhard Genzel, and Andrea Ghez for their ground breaking work in the theory and observation of black holes. This article traces the history of our understanding of black holes. Ω

https://earthsky.org/space/nobel-prize-3-astrophysicists-black-holes-penrose-genzel-ghez?utm_source=EarthSky+News&utm_campaign=8b87ddd5d3-EMAIL_CAMPAIGN_2018_02_02_COPY_01&utm_medium=email&utm_term=0_c643945d79-8b87ddd5d3-394671529

Astronomy-related images, video clips and documentaries on the Internet

[The Largest Star in the Universe – Size Comparison – YouTube](#) The largest known star in the Universe is the red hyper giant star Stephenson 2-18 with radius 2150 times that of the Sun. Comparing the Sun's radius with its radius is like comparing a little ball with radius 1 centimeter with that of a giant ball with radius 21.50 meters!

[Non-Carbon Based Life – YouTube](#) Other solvents than water for carbon-based life and life based on other elements than carbon, and even non-chemical life, are discussed. Very speculative, but not impossible.

[10 Ways Alien Life Could be Radically Different from Earth – YouTube](#) Similar to the last mentioned documentary above.

[Astronomer Explains How SETI Searches for Aliens | WIRED – YouTube](#) SETI Institute Director Emeritus Prof Jill Tarter explains the science and logistics that goes into searching for extraterrestrial life, and the reasons why there's still so much to explore.

[Emily Levesque Public Lecture: The Weirdest Stars in the Universe – YouTube](#) An excellent public lecture by Dr Emily Levesque of the Perimeter Institute for Theoretical Physics.

[10 Bizarre Deep Space Astronomical Objects – YouTube](#)

[What does Earth look like from outer space? | Astronomy Essentials | EarthSky](#)

See what Earth looks like if you could move away from it in a spaceship. Eventually, from beyond the orbit of Neptune, 6 billion kilometers away, you would see it as in the famous image named **Pale Blue Dot** – as a tiny blue speck in a sunbeam. It will make you realize how small and unimportant everyone and everyone's little affairs are in this great, wonderful and mysterious Universe in which we find ourselves. (**Suggestion:** read the book "**Pale Blue Dot**" by Carl Sagan.)

[Perseverance rover snaps gorgeous HD panorama of Mars landing site | Live Science](#)

See a high definition 360° panorama of the ancient river delta in Jezero crater on Mars.

Astronomy basics.

[What's the difference between asteroids and comets? | Astronomy Essentials | EarthSky](#)

Observing: An insect by the name of NGC 6210 - by Magda Streicher

So many of the objects in space have nicknames (which are not, of course, particularly scientific), and the planetary nebula NGC 6210 is one of these, having been nicknamed for its remarkable resemblance in shape to a beetle or even a turtle. The gaseous nebula shedded gas layers which have given the object its present distinctive shape, trimmed by winds of change caused by the hot inner star. In order really to appreciate this nebula it is necessary to use a fair amount of magnification and, of course, to do one's observation in the darkest night conditions possible.

NGC 6210 is located in the northern constellation Hercules and many of us in the southern hemisphere may find it difficult to spot. The northern hemisphere amateurs refer to this object as the Turtle Nebula. The use of filters and a medium-sized telescope is therefore recommended. Planetary nebulae tell a story with their shapes in different categories. It is also possible to observe a large amount of detail.

NGC 6210 was discovered by Friedrich Georg Wilhelm Struve, initially as a small out-of-focus puff of light. To my eye this planetary nebula does not appear as it has an uneven fringed edge. It reveals a shade of light blue to grey-green with an easily seen central star. With high magnification some markings can be spotted on the surface of the nebula.

The town Tartu, now the second largest town in Estonia, is the place where the famous astronomer Friedrich Georg Wilhelm Struve once, from the year 1818 to 1839 worked as director of the institute. He used the 9-inch Fraunhofer refractor, which was at that time, from the year 1824 to the year 1854 the largest telescope in the world and the first telescope to be clock-driven. In 1838 he was a pioneer in the measurement of stellar parallax with Bessel and Thomas Hendersson. The star for which he determined the distance was Vega (Alpha Lyrae), located in the well know constellation Lyra. His work

with double stars is very famous and his "Mesurae Micrometricae" has details of over 3000 pairs.

And last, but not least, he supervised the measurement of the Russo-Scandinavian arc of meridian stretching from the Black Sea to the Arctic Ocean. The results were published in 1860.

Credit goes to astronomy friend Risto Heikkilä, who visit Tartu and provide this information.

This object always reminds me of the wonderful work done by the so-called dung beetle to balance our natural environment. Ω



OBJECT	TYPE	RA	DEC	MAG	SIZE
NGC 6210	Planetary nebula	16 h 44.5 m	+23°48.0'	9.3	0.30"

NOTICE BOARD

Beanies: Beanies will be offered for sale @ R40.00 each at every monthly meeting, until they are sold out.

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.

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:**
MNSSA: <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 “2021 Sky Guide Africa South”. Ω**

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