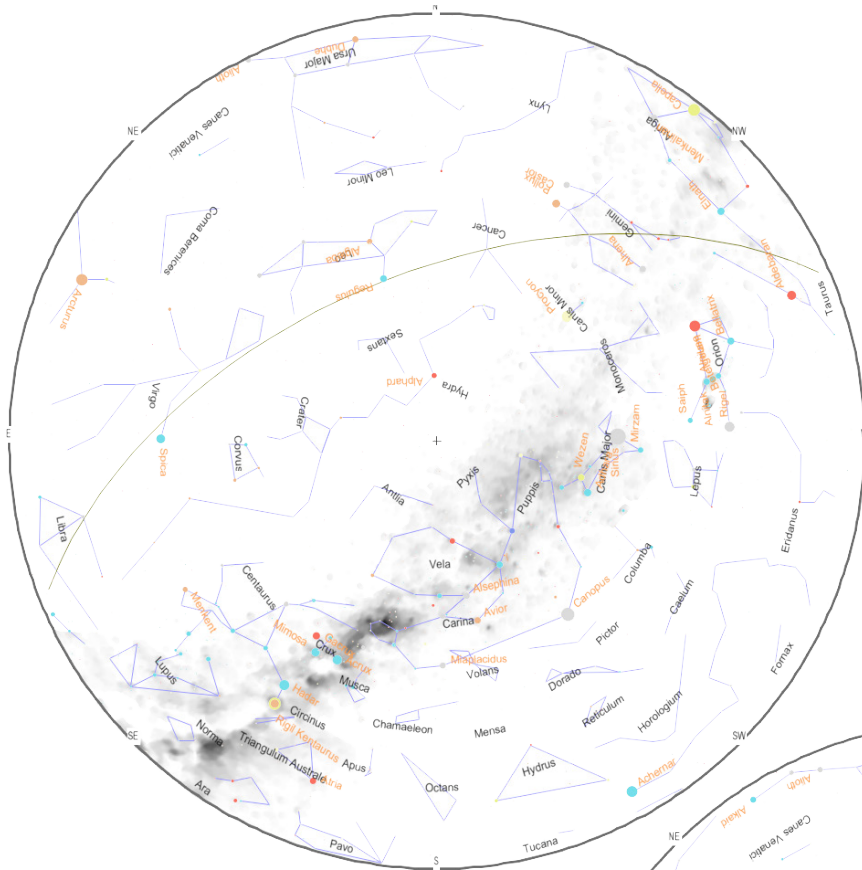


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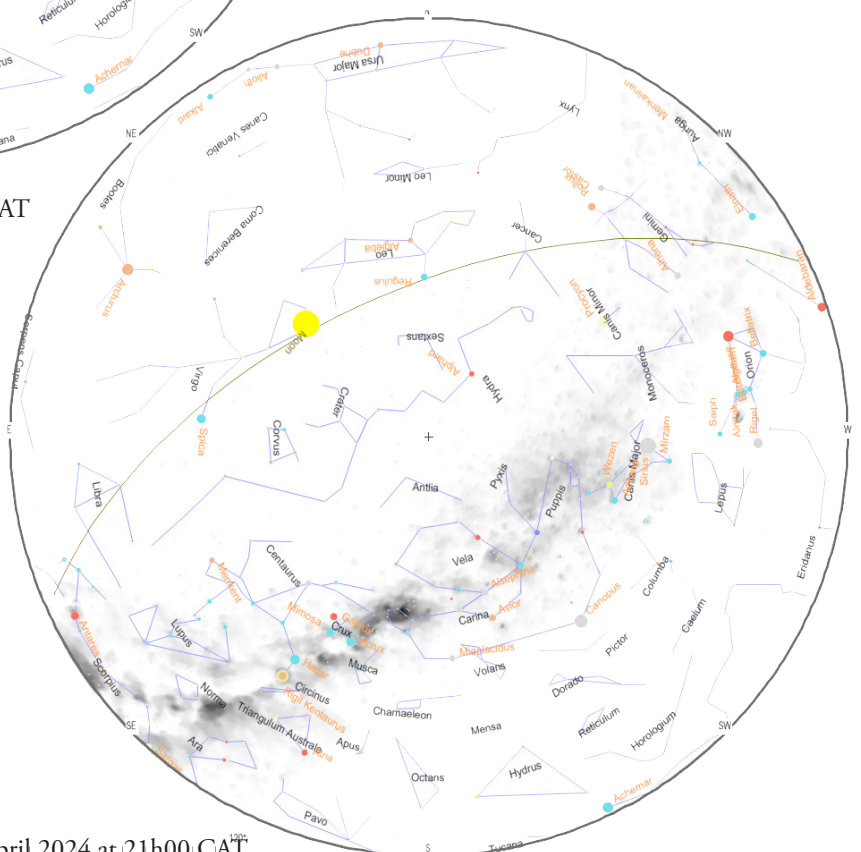
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Astronews April 2024

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Star chart at Windhoek on 10 April 2024 at 21h00 CAT



Star chart at Windhoek on 20 April 2024 at 21h00 CAT

Moon Phases

| | |
|-------------|---------------|
| 02 Apr 2024 | Last Quarter |
| 08 Apr 2024 | New Moon |
| 15 Apr 2024 | First Quarter |
| 24 Apr 2024 | Full Moon |

Solar System

| Planet | Visibility | Rise | Culm. | Set |
|---------|------------|-------|-------|-------|
| Mercury | | 06:39 | 12:26 | 18:14 |
| Venus | | 06:03 | 12:00 | 17:57 |
| Mars | | 04:18 | 10:31 | 16:44 |
| Jupiter | | 08:53 | 14:26 | 19:59 |
| Saturn | | 04:07 | 10:22 | 16:37 |

Mercury recently passed in front of the Sun at an inferior solar conjunction. From Windhoek, it is not readily observable since it is very close to the Sun, at a separation of only 5° from it.

Venus will soon pass behind the Sun. From Windhoek, however, it is visible in the dawn sky, rising at 06:03 (CAT) – 59 minutes before the Sun – and reaching an altitude of 9° above the eastern horizon before fading from view as dawn breaks at around 06:48.

Mars recently passed behind the Sun at solar conjunction. From Windhoek, however, it is visible in the dawn sky, rising at 04:18 (CAT) – 2 hours and 44 minutes before the Sun – and reaching an altitude of 29° above the eastern horizon before fading from view as dawn breaks at around 06:29.

Jupiter will soon pass behind the Sun at solar conjunction. From Windhoek, it will become visible at around 18:52 (CAT), 13° above your north-western horizon, as dusk fades to darkness. It will then sink towards the horizon, setting 1 hour and 21 minutes after the Sun at 19:59.

Saturn recently passed behind the Sun at solar conjunction. From Windhoek, however, it is visible in the dawn sky, rising at 04:07 (CAT) – 2 hours and 55 minutes before the Sun – and reaching an altitude of 32° above the eastern horizon before fading from view as dawn breaks at around 06:30.

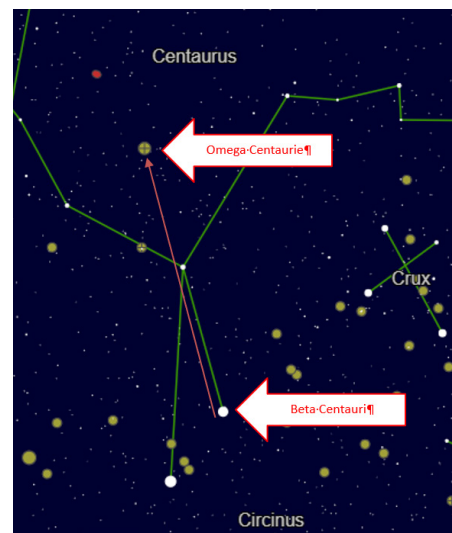
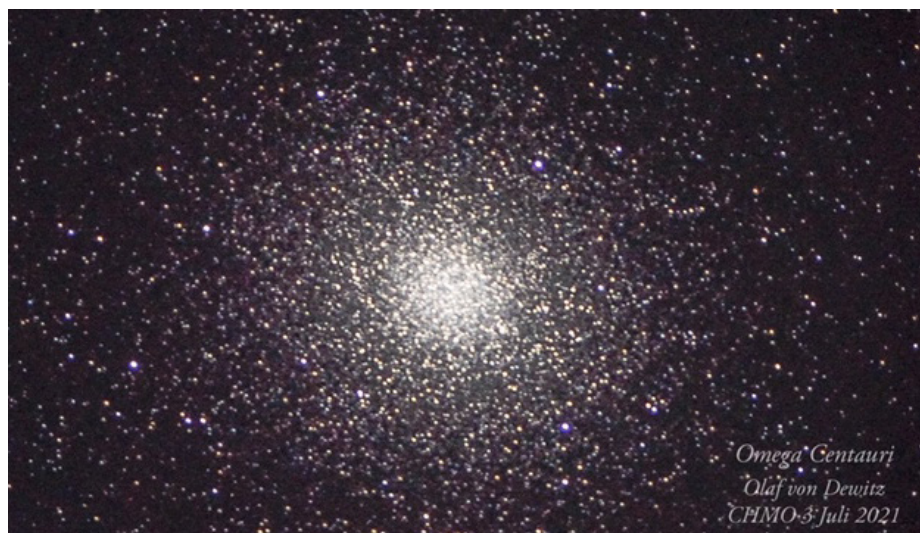
Other Occurrences

Answering to several queries. The Comet 12P/Pons-Brooks will peak at magnitude 4.6 on 21 April 2024 and will be in the Constellation of Aries. With The sun in Aries, it will not be visible in Namibia.

Also, not visible from Namibia is the Total solar eclipse on 8 April 2025. The eclipse will be visible from south-eastern Canada, Mexico and the eastern Contiguous United States.

Omega Centauri

The brightest globular cluster in the sky, Omega Centauri (mag 3.6) will be well placed in the evening sky in the coming weeks. On 13 April, it will reach its highest point in the sky at around midnight local time, and on subsequent evenings it will culminate four minutes earlier each day. From central Namibia, it will become visible at around 19:33 and will be visible all night. At magnitude 3.6 it can be seen in a dark site with the naked eye and is an excellent object, but is visible through a pair of binoculars or a small telescope.



Constellation of the Month

by Simon van der Lingen

Canis Major

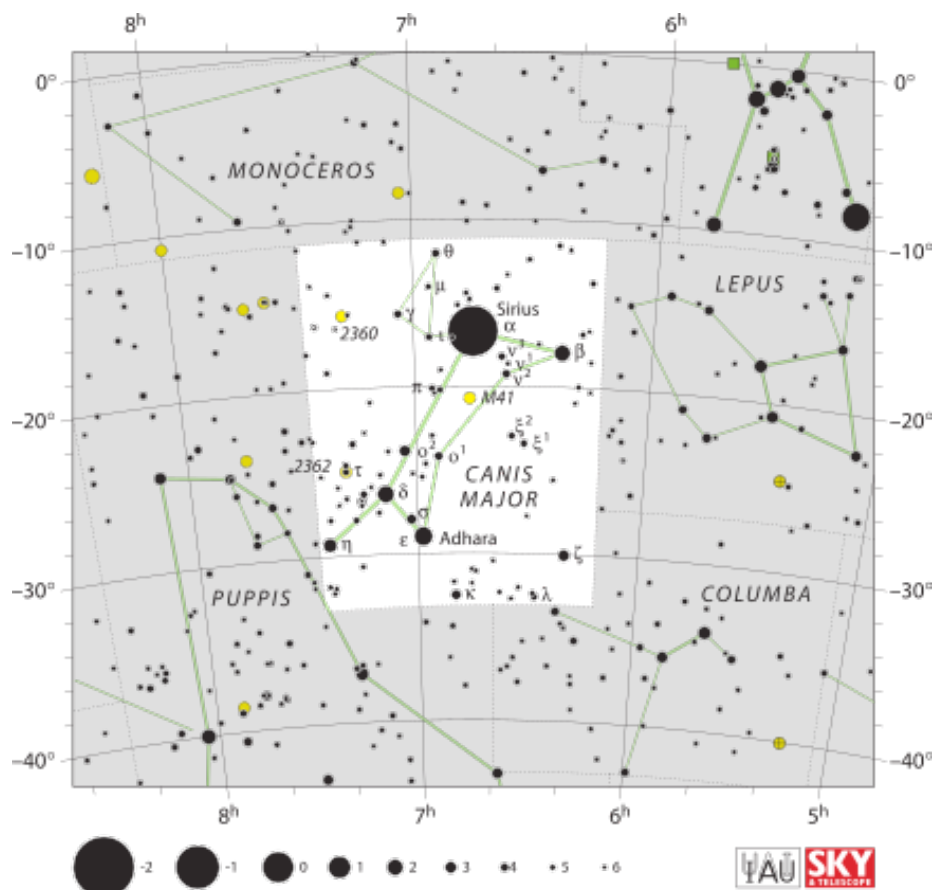
When Zeus threw Orion into the sky to rescue him from Gaea's scorpion, (sent by her to punish Orion for his unsustainable hunting on the island of Chios) he also sent two of Orion's hunting dogs, Canis Major and Canis Minor to keep him company, along with Lepus the Hare, to provide them with some sport during their time in the heavens.

Canis Major, the Great Dog, is easily found by extending the line of Orion's Belt eastwards a few degrees to find the brightest star in our night sky. This is Sirius, the Dog Star and the mouth of the Great Dog. Having found Sirius, the rest of Canis Major is relatively easy to find, although, to my mind, the pattern of stars resembles a dachshund more than a huge mastiff.

Associated with Orion, Canis Major is one of the Summer Constellations, but to the east of Orion, it is still well placed for naked-eye observation in April. Sirius is the eighth closest star to us, at 8.6 light years away, and weighing in at two solar masses, about 25 times as bright as the Sun.

As the brightest star in our sky, (Venus and Jupiter are brighter but, of course, are not stars) Sirius has attracted attention and generated more myths than any other star. The ancient Egyptians used its predawn appearance to warn them of seasonal flooding of the Nile River and the ancient Greeks as a warning of the hottest and most unpleasant days of their summer, when they should expect thunderstorms, fevers, bad luck and mad dogs – Greeks and Egyptians named it the "Dog Star" as a consequence. But the most interesting legend associated with it originates with the Dogon tribe of Mali. In the 1930s, Dogon priests told two French anthropologists that they had been taught by amphibious beings they call the Nommo, that Sirius has an unseen companion star, a small and incredibly heavy body orbiting Sirius every fifty years. This almost perfectly describes Sirius B, a White Dwarf orbiting Sirius every 50.1 years.

A White Dwarf is what is left when a star of approximately the same mass as our Sun converts enough of the Hydrogen at its core into Helium. As the Helium core gets more massive it also gets hotter and denser, until eventually conditions allow the conversion of Helium to Carbon. Before this happens, the star expands dramatically, becoming a



Red Giant. The burst of energy provided by the rapid conversion of Helium to Carbon drives off the outer layers of the star to form a Planetary Nebula, leaving behind a super-hot, super dense Carbon core of about the same mass as our Sun squeezed into a body the size of the Earth. No longer generating energy, the White Dwarf gradually cools as it radiates heat away, eventually solidifying into a giant diamond.

For the sceptically minded, Sirius B orbits close enough to Sirius A that it was only discovered in 1862, possibly giving time for more earthly knowledge to reach the astronomically-minded Dogons. The Dogons claim a third body, lighter and larger than Sirius B is also part of the system. To date, modern astronomers have not found a third star but a 1995 study found disturbances in the motion of the two stars suggesting the

possibility of a third small star. Time will tell.

Amateur astronomers should also look for the Little Beehive Cluster, M41 or NGC2287, in Canis Major, on their Star Charts. The Little Beehive Cluster is an Open Cluster of about 100 stars that should be visible to the naked eye in a dark sky, and clearly visible through binoculars. Open Clusters are groups of stars that have recently formed from the same gas cloud and are usually spectacular through binoculars. M41 formed about 190 million years ago.

With only a little imagination, Canis Major does look a little dog-like, but the Little Dog, Canis Minor is a constellation of only two stars. It is nevertheless easy to find and shares a few similarities to Canis Major. The brightest star of the constellation, Procyon, is the eighth brightest in the sky and forms an almost perfect equilateral triangle with Betelgeuse and Sirius, known in the Northern Hemisphere as the Winter Triangle. Like Sirius, Procyon is significantly heavier than our Sun (1.5 solar masses) and at 11.5 light years away, is close to us. Also like Sirius, Procyon is orbited by a White Dwarf,

although Procyon B is much less massive than Sirius B.

Gomeisa, Procyon's partner in the constellation, is more massive and very much brighter than even Procyon but appears dim because it is far more distant at 160 light years away.

Credits

SkyChart: Cartes du Ciel/Wikipedia, Data: <https://in-the-sky.org/> / ASSA Sky Guide 2024, Pictures: Wikipedia