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What's Up – March 2016

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Sun and Moon

Last Quarter falls on the 2nd of March at 01h11. New Moon occurs on the 9th of March at 03h54. First Quarter falls on the 15th of March at 19h03. The Full Moon occurs on the 23rd of March at 14h01.
On the 25th of March at 16h16 the Moon will be at apogee (furthest from Earth) at a distance of 406 100 km. The Moon will be at perigee (closest approach to Earth) at a distance of 359 500 km on the 10th at 09h02.

Planetary and Other Events – Morning and Evening

All five naked eye planets (Mercury, Venus, Mars, Jupiter and Saturn) can be seen in the morning sky for the first half of March, later in the month only Venus, Mars and Saturn are visible. Neptune can be seen at dawn around month end. On March 20 and 21, Venus and Neptune are less than one degree apart. At Sunset, only Jupiter is prominent this month. Uranus can be seen during the first week. At midnight, Mars, Jupiter and Saturn can be seen. On the first of March, Mars can be observed near the Moon. On the 7th of March, the moon is near the Venus and on the 8th of March, the Moon is near the Mercury. On the 21st and 22nd of March Jupiter is near the Moon. On the 29th, Moon is near Saturn and Mars.
Two meteor showers are active in March. The gamma-Normids are active from February the 25th to March the 22nd, peaking on the 13th of March. These showers are best viewed between 00:00 AM and 04:30 AM looking south-east towards the constellation Norma. Hourly rates are expected to be around 8 meteors per hour at the maximum. The delta-Pavonids are active from the 11th March to the 16th April peaking on the 6th April. They are best viewed between 02:00 AM and 04:30 AM looking towards the constellation of Pavo (the Peacock). Hourly rates are expected to be around 5 meteors per hour at the maximum.
The March (Vernal) Equinox occurs on the 20th of March at 06:31 AM SAST (local time), this marks one of the two dates in the year where day and night are approximately equal in length.

The Evening Sky Stars

The bright stars near the summer Milky Way continue to dominate the evening sky, just as in February. The Milky Way runs from NNW to SE in early evening at the beginning of March, and from NW to SE at the end of the month. If you live where a lack of city lights allows you to see the Milky Way, notice how very different the northern and southern portions appear. In the north the Milky Way appears relatively smooth and dim, becoming suddenly brighter and more clumpy south of straight up. In the north we're looking out toward the edge of our Milky Way galaxy; while at the point where we see the sudden brightening (in the constellation of Carina, the Keel of the great ship Argo) we are looking along our spiral arm of the galaxy, where there are far more stars in the line of sight. Orion is still high in the NNW in early evening, outlined by the bright stars Rigel, Saif, Betelguese and Bellatrix. Taurus the Bull, with the brightish star Aldeberan, is low in the NW.
Directly below Orion in the north are the stars of Auriga the Charioteer, with brilliant Capella near the horizon. Capella is really a pair of giant stars which orbit each other every 104 days. About 100 million km apart, the two stars are each about 10 times the diameter of the Sun, and 50 and 80 times as bright, respectively.
Low in the NNE are the bright stars of the Twins, Castor and Pollux. Castor is another interesting multiple star. Through a telescope, there are 3 stars visible, and astronomers have discovered that each of these is itself double. Castor thus consists of 3 pairs of stars, with each pair of stars orbiting each other with periods of 20 hours to 9 days, the two bright pairs orbiting each other every 400 years, and the dim pair orbiting the other two over many thousands of years.
The brightest star in the sky (not counting planets), Sirius the Dog Star, appears almost overhead on March evenings, while a bit south of the point overhead is the second brightest star in the sky, Canopus. Rising in the southeast are the stars of the Southern Cross and the Pointers (Alpha and Beta Centauri). Alpha Centauri is a triple system, with two sunlike stars orbiting each other every 80 years and a dim red dwarf tagging along at a much larger distance. This rather insignificant star was discovered by Robert Innes at the Union Observatory in Johannesburg in 1915, who also suggested the name Proxima. As seen from a planet around either of its brighter companions, Proxima would be an ordinary dimmish star, invisible for observers plagued by city lights. When it was discovered, Proxima was the faintest star known, but it has long lost even this distinction. At a little over 4 light years away, the stars of the Alpha Centauri system are the closest neighbours of our own Sun.
Achernar and the Magellanic Clouds (looking like detached pieces of the Milky Way) can still be seen in the southwest on March evenings. The Large and Small Clouds are the nearest galaxies to our own Milky Way (with the exception of two small galaxies actually being swallowed by our galaxy) and are about 180 thousand and 190 thousand light years away respectively. Compare this with Achernar, which is located inside the Milky Way and only a mere 90 light years away. The Sotho referred to Achernar as the senakane (the little horn) while the shield of the little horn is the Small Magellanic Cloud, known as mo'hora le tlala (plenty and famine). If dry dusty air made it appear dim, famine was to be expected.

The Morning Sky Stars

Bright orange Arcturus is low in the northwest before dawn, while ice-white Vega can be seen rising in the northeast. Vega is one of our neighbours, only 25 light years away, and is surrounded by a disk of dust which has intrigued astronomers. To the right of Arcturus is the dim semicircle of the Northern Crown, with the stars of Hercules between the Crown and Vega. Almost overhead is Antares, heart of the Scorpion. The Milky Way runs from northeast to southwest, with the brightest part of the Milky Way in the Scorpion and in Sagittarius the Archer. High in the south are the stars of the Southern Cross and the Pointers, with bright Canopus very low in the southwest. Achernar shines low in the southeast, with the stars of the 'Celestial Aviary' above it. In this part of the sky are the Toucan, the Phoenix, the Crane and the Peacock, assorted scientific instruments and the Southern Fish.

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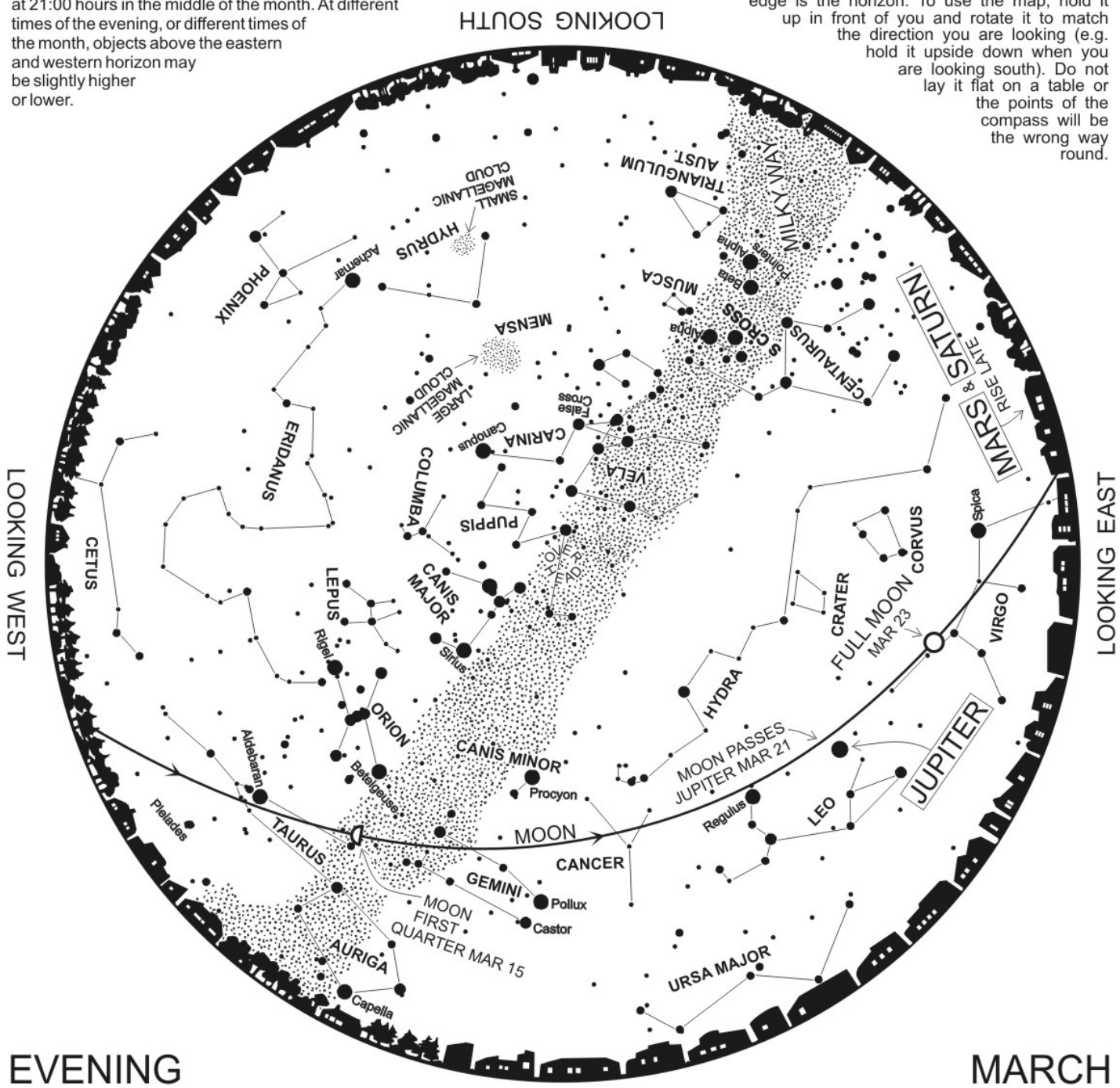
The map shows the night sky visible above the Cape at 21:00 hours in the middle of the month. At different times of the evening, or different times of the month, objects above the eastern and western horizon may be slightly higher or lower.

The centre of the map is the overhead point, the edge is the horizon. To use the map, hold it up in front of you and rotate it to match the direction you are looking (e.g. hold it upside down when you are looking south). Do not lay it flat on a table or the points of the compass will be the wrong way round.



EVENING SKY

MARCH 2016

The constellation of Orion, the Hunter continues to dominate the summer evening sky. In 1979 a mammoth ivory carving estimated between 32 000 and 38 000 years old was found in a cave in the Ach Valley in Germany, depicting what appears be the earliest example of this easily recognisable constellation. Three bright stars in a row form the well-known asterism of Orion's Belt. Their names are Arabic in origin and are from east to west Mintaka ("belt"), Alnilam ("string of pearls") and Alnitak ("girdle"). Alnitak is closest to us at a distance of 800 light years, while Mintaka is 1200 light years away. Alnilam, 1340 light years away, is one of the furthest stars we can see with the naked eye. In traditional Xhosa culture they represent a holy place in the sky and to show respect, only a bent finger may be used to point in their direction.

Planet Jupiter is in Leo (Lion).

The Moon is in the evening sky from 11 March until 27 March. Neither the penumbral lunar eclipse on 23 March, nor the total solar eclipse on 9 March is visible from Africa.

Autumn equinox is on 20 March.

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