

Stargazing Guide: July 2020

What to look out for...

Constellations (star pictures) and interesting stars:

Look south/east to spot three very bright stars making a large triangle in the sky. These are **Deneb**, **Vega** and **Altair**, which form the **Summer Triangle**.

Each of these stars is part of its own constellation too:

1 Cygnus (say "Sig-nus") The Flying Swan, with the supergiant star Deneb ("Den-ebb") as the bird's tail. Look for a big cross of stars starting here.

Deneb is 110 times wider than our Sun and about 200,000 times as bright!

2 Lyra ("Lie-ra"), The Lyre. You'll need dark skies to see all its stars, but begin with the bright star **Vega** ("Vey-ga"). The constellation represents a musical stringed instrument.

3 Aquila ("A-quill-a") - the Eagle. The bright star **Altair** ("Al-tare") is easily recognised as it has a star each side of it.

In the Greek stories, the swan represents Orpheus, a famous musician who played the Lyre. After his death, his lyre was thrown into a river. Zeus, King of the Greek Gods, sent his eagle to fetch it back, and put them all in the sky.



4 Scorpius ("Score-pee-us") the Scorpion. Only visible in midsummer, and even then he never rises high in the sky, so you need a low southern horizon. The bright, red star of his heart is easiest to see. We can never see the full curve of his tail from the UK but if you travel south for your holidays have a look from there.

How to use this chart:

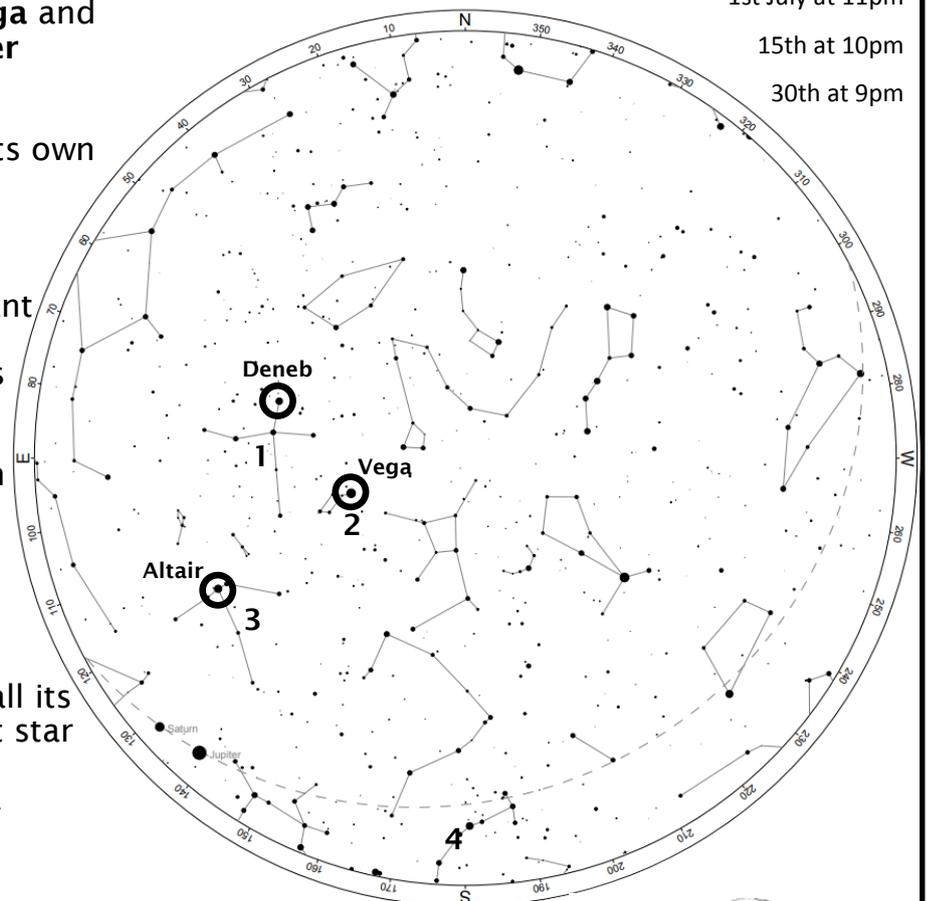
Imagine the chart flat & upside-down above your head. The circle around the outside shows the horizon all around you. Turn the chart to have North (N), South (S), East or West at the front depending on which direction you are looking.

Map shows:

1st July at 11pm

15th at 10pm

30th at 9pm



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The Moon

Originally, the length of a month was tied to the motions of the Moon, but this didn't give exactly 12 months each year! The months now have fixed lengths to make calendars simpler. So Moon phases no longer match the length of the month.



Planets

Jupiter and Saturn, both start the month rising shortly after sunset rising earlier each day throughout the month with Jupiter rising first throughout the month. They will set just shortly before the sun rises. Look for the bright dots between Sagittarius and Capricornus.

Mars appears in the sky after midnight and is positioned easterly before tracking across the south of the sky. It stays in a relatively similar position all month near to Pisces.

Venus remains ahead of the Sun throughout the month rising about two hours before sunrise. stays in a relatively similar position all month in the middle of Taurus.

Mercury starts the month very close to the Sun making it hard to spot, however it rises earlier each day of the month making it more visible in the pre-dawn sky.

Using Binoculars

We are inside the Milky Way galaxy and so see its stars all around us in every direction. However, as our galaxy is flat we see most of its stars in one line across the sky. This line is shown by the path that Cygnus, the Swan, flies towards Scorpius' stinging tail.

Sweeping your binoculars along this path, you will be looking into the thickness of the galaxy and so will see more stars and objects. The centre of our galaxy is to the left of Scorpius' tail.

Tip of the Month

The best time to view craters and mountains on the Moon is when it is in the First Quarter. At this time the Moon is lit from the side, casting shadow into the craters so they stand out well. Third Quarter Moons also look great, but are less often observed as they don't rise until very late at night - you are more likely to see this phase in the morning sky.

You will see fewer features at Full Moon, but can look for huge rays of moon rock and dust that were thrown out from the larger craters when they were formed.

Download this star guide and those for other months from:
<http://www.winchestersciencecentre.org/starguides>

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