



# Stargazing Guide: July 2019



## 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**, starts the month rising shortly after sunset, then rises earlier each day throughout the month and setting just shortly before the sun rises, it can be seen just above Scorpius in the night time sky

**Saturn** rises shortly after Jupiter and they remain relative to each other throughout the month with Saturn setting just before the Sun rises. Saturn can be seen just above and behind Sagittarius in the sky.

**Mars** is closely following the Sun in the sky, setting shortly afterwards, it may possible to spot just after sunset, but appears closer to the sun each day making it more difficult to see. **Venus** remains ahead of the Sun throughout the month and may be visible just before sunrise. Like Mars though it will appear closer to the sun each day making it more difficult to see

**Mercury** starts the month in a similar position for Mars, following the Sun, but quickly appears closer to the Sun, such that mid-month they will be at roughly the same relative position. It will continue to process, now ahead of the Sun as the month continues, making it possible to spot before sunset at the end of the month.

## 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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