

IN THE SKY DURING JULY*

July will be a special month in the sky. The summer's most recognizable constellations, Scorpius (the Scorpion) followed by Sagittarius (the Archer) will be climbing into good view low in the southern sky. Their main stars form outlines that look like a scorpion and a teapot. On moonless nights, the subtle glow of the Milky Way will extend upward from these constellations and across the sky, providing an amazing view for those who can escape the glow of city lights.

All the stars we see in the night sky are nearby stars of our Milky Way galaxy. However, we see the glow from a dense band of stars in one direction and fewer stars in the other directions because the galaxy is flat. When we look at the Milky Way, we are looking through the flat disk of the galaxy. Also, as the result of the Earth's rotation and its orbit around the Sun, the Milky Way gradually changes its orientation in the sky, but it is always there. To the ancient Greeks, this band across the sky resembled a smear of milk, and this probably gave rise to the myth that it was the spilled milk of the gods.

Only two planets will be visible in the evening sky. Mercury will be low in the western sky about 45 minutes after sunset as July begins, but it will soon drop and be lost in the twilight glow. Mars will be in the southwestern sky as soon as it gets dark. Although it will continue to get dimmer as Earth leaves it farther behind, you should be able to find it, especially if you have been following Mars as it left Gemini (the Twins), passed through Cancer (the Crab), and is now to the left (eastward) of Regulus, the brightest star in Leo (the Lion). It will continue its eastward motion and pass below the fairly bright star Denebola, which represents the lion's tail, during mid-month.

A line from Mars through Denebola will point to the small and dim constellation Coma Berenices (Berenice's Hair). The constellation is also to the right (westward) of the bright star Antares in the constellation Bootes (the Herdsman) and below the fairly bright star Cor Caroli in the otherwise dim constellation Canes Venatici (the Hunting Dogs) that is below the handle of the Big Dipper.

Coma Berenices is the only constellation named for an historical figure, the Egyptian Queen Berenice II, the wife of Ptolemy III. As the story goes, Queen Berenice gave her long beautiful hair as a sacrifice to the goddess Aphrodite when her husband returned unharmed from a difficult war. When her hair disappeared from the temple, the priests were facing death until the quick-thinking court astronomer, Conon, said that Aphrodite had been so impressed by Berenice's sacrifice that she had taken the hair into the sky for all to see. He then showed the queen the smattering of dim stars that make up the constellation. Unless you have a very dark sky (like the Egyptians did), Coma Berenice is best seen with binoculars. Its most prominent feature is the large Coma open star cluster that mostly fills a binocular field of view.

On July 3, the Earth will be at its farthest point from the Sun, showing that the warmth of summer is not caused by Earth's distance to the Sun. Also, when the Earth is farthest from the Sun, its orbital speed is the slowest. As a result, the summer season has a few more days than winter.

Observing Highlights

- July 3 The Moon will be close to the lower left of Spica, the brightest star in the constellation Virgo (the Maiden).
- July 6 The bright Moon will be to the right of Antares, the brightest star in the constellation Scorpius (the Scorpion). The Moon will move eastward in its orbit and will be to the lower left of Antares on the 7th.
- July 16 The Moon will be close above Saturn after they rise just after midnight.
- July 21 Before dawn, the crescent Moon will be above brilliant Venus.
- July 26 Star Party sponsored by Grout Museum & Black Hawk Astronomy Club, Prairie Grove Park, Waterloo, 9-10:30.
- July 28 The Moon will be close to the lower left of Mars. They both will be to the lower left of Denebola that represents the tail of Leo (the Lion) and farther below the dim constellation Coma Berenices (Berenice's Hair).

<u>Moon Phase</u>	<u>Date</u>	<u>Rises</u>	<u>Highest Point</u>	<u>Sets</u>	<u>When Visible</u>
First quarter	July 2	Noon	Sunset	Midnight	P.M.
Full moon	July 10	Sunset	Midnight	Sunrise	All night
Last quarter	July 17	Midnight	Sunrise	Noon	A.M.
New Moon	July 24	Sunrise	Noon	Sunset	Not visible

*Dates and times are approximate.

Sources: *StarDate*, Jan-Feb 2025. Vol. 53, No. 1.

Chartrand III, M. R. *Nat. Audubon Soc. Field Guide to the Night Sky*. A. A. Krump, Inc, NY pub. 1995.

Wikipedia.org, the online encyclopedia

SkyandTelescope.org