

I hope you enjoyed our tour through Kepler's Laws of Planetary Motion over the past month. It's quite remarkable that all of that work was done without the use of a telescope – just with careful and precise angular position measurements by Tycho Brahe's team and Kepler's mind working out the mathematics. In this installment, let's focus on seeing what's up right now.

In the evenings...

Venus is still hanging in there in the west-northwest after sunset. If you have a telescope or a pair of binoculars, you will see that the planet is now a slender

crescent. As Venus gets closer and closer to moving in between us and the Sun, we are now seeing more of the night side of the planet and only a thin strip of the sunlit side. Above and to the left of Venus, is the constellation Gemini. The Twins are standing upright in the west. The left (southeastern) twin is Pollux and the right (northwestern) twin is Castor. Remember watching Leo the Lion climbing up in the East in late March? Well now, the big cat is lounging comfortably in the South. Between the Twins and the Lion is the Crab – the constellation Cancer. Its stars are dimmer than those of Gemini and Leo, so it is often overlooked. In its middle though is an object worth noting. The Beehive Cluster, also known as M44, is a group of about 1,000 stars moving together through our galaxy. While you have your telescope or binoculars out to see Venus, turn your equipment over to the Beehive and take a look. It's a pretty sight to behold. In a couple of weeks, when the Moon has left the evening sky, you may be able to pick out M44 with your unaided eyes.

In the "if you can't beat them, join them" category, while we do have the bright Moon in the evenings, be sure to observe the it, too. As our view of the Moon changes from the 1st Quarter phase (on Apr 30th) to the Full phase (during the night of the 6th/7th), we can watch it slide past Leo and into the constellation Virgo, the Maiden.

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In the mornings...

If you are up before the dawn begins, which now around 4:30 a.m., you can still see the lineup of Jupiter, Saturn, and Mars (and Neptune, if you use a telescope). What happened to Mercury? Mercury has continued to move eastward in the sky and is now out of sight, lost in the glare of the Sun. For constellations to look for in the mornings, Scorpius the Scorpion is low in the South-southwest. The Teapot asterism in Sagittarius the Archer is due south, about two fist-widths with your arm held out in front of you (20 degrees) above the horizon. Just above these two constellations is the constellation Ophiuchus (OFF-ee-YOO-kus) the Serpent-bearer. Ophiuchus is an interesting constellation. The constellation's boundaries straddle the ecliptic. Because of that, it is sometimes considered as the 13th constellation of the Zodiac. As the Sun, Moon, and planets travel along the Ecliptic they move through Ophiuchus after leaving Scorpius and before they enter Sagittarius. In fact, the Sun spends more time in Ophiuchus each year (about 18 days) than it does in Scorpius (about 7 days).



I know we haven't had many clear nights and mornings these past couple of weeks, but when we do get them, be sure to try to find the planets and constellations shown in the diagrams.

Is there a particular astronomy topic that you would like to see me discuss in a future What's Up? If so, you can reach me at astroblog@comcast.net with that and any other questions and comments you have. This is What's Up? Installment #19.

Keep looking up!

Barry