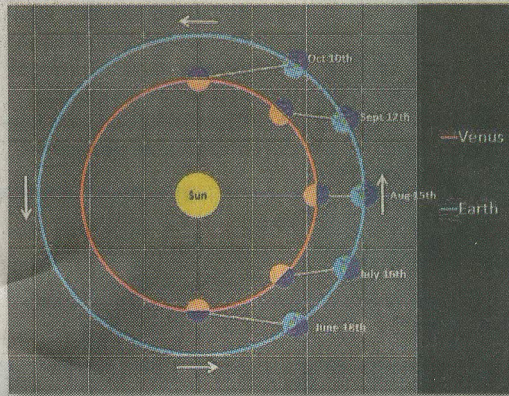


QUAD-CITIES SKY WATCH



Submitted

Because Venus is closer to the sun, it moves much faster than Earth, 21.8 miles per second compared with 18.5. This summer, it gradually will be catching up with Earth and, by mid-August, Venus will be about 26 million miles from Earth, the closest any planet gets to Earth. Unfortunately, when Venus makes this close approach, it will be too near the glare of the sun for us to see from Earth.

Watch Venus and Earth play planetary tag

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Popular Astronomy Club

This summer, there will be some interesting choreography between Earth and her sister planet, Venus.

In July and August, Venus gradually will approach the Earth until about Aug. 15, when Venus will be a scant 26 million miles from Earth.

Because Venus is closer to the sun than Earth (67 million miles vs. 93 million miles), it must have higher speed than Earth to avoid falling into the Sun. Because of Venus' higher orbital speed, it will overtake Earth as the two planets swing around the Sun.

IF YOU GO

On July 18, join the Popular Astronomy Club in the parking lot at Niabi Zoo, Coal Valley, to observe Venus and the moon. Sunset will be about 8:30 p.m.

Venus overtakes Earth every 584 days, as it changes from the Evening Star, visible after sunset, to the Morning Star, visible before sunrise. This spring, Venus has put on a glorious

show in the early evening sky. If you've seen a dazzlingly bright "star" in the western sky right after sunset, you have seen Venus.

All the planets revolve in their orbits around the Sun in the same direction. Because Venus and Earth are so close to each other, there are times (like this summer) when they appear to be racing each other in the sky.

In mid-June, Venus was behind Earth, but every day Venus gains on Earth as the two planets move around the sun. As this happens, Venus will grow in apparent size a bit each day.

In early July, Venus will surpass Jupiter in apparent size, and by mid-July, Venus will "grow" another 30 percent so it will appear to be the largest solar system object in our sky except for the sun and moon.

While Venus is growing, it also will be changing shape. Because Venus is closer to the sun, we were looking at it from the side in the spring, so we only saw half of the sunlit side. With a small telescope, Venus appeared to look like the moon at quarter phase (half illuminated).

This summer, as Venus appears to grow in size, we'll see less of the illuminated side. In July, Venus will look like a crescent moon when viewed through a small telescope. While Venus gets progressively larger and wanes to an ever slimmer crescent shape, it also will be sinking lower in the western sky each day.

By mid-July, Venus will be very low in the west at sunset. By the end of July, it will sink too far to be seen locally. As Venus overtakes Earth by mid-August, it will pass very near the sun, where it will be impossible to see because of the sun's glare.

By early September, Venus will emerge from the sun's glare as a bright morning star as it races ahead of Earth as both planets continue in their orbits. Then Venus as a morning star this fall gradually will diminish in size as it gets progressively farther from Earth.

It also will wax (grow) from a thin crescent in early September to a quarter (half-illuminated) disk by mid-October.

Although Venus and Earth are called sister planets because they're nearly the same size and mass, that's where the similarity ends.

Venus has a dense atmosphere of carbon dioxide, sulfuric acid and other unbreathable gasses that produces a runaway greenhouse effect, keeping the surface temperature at more than 800 degrees Fahrenheit and the surface pressure 90 times greater than Earth.

The dense mixture of poisonous gasses produces a very thick cloud deck hiding the surface from view.

Venus also rotates backward (compared to Earth) taking 243 Earth days to rotate once on its axis. Its orbit around the Sun takes 225 Earth days, compared to the Earth's 365. This results in Venus' day being longer than its year.