

# Science

## “Mercury’s Visit – What’s the Fuss?”

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A very significant celestial event took place in our own solar system on November 11, 2019. The planet Mercury crossed the disc of the Sun on that day. In laymen’s term, the planet Mercury came directly through the path between the Earth and Sun. So what’s the fuss about it? After all, this event will happen again in the year 2032. (By the way, planets Mercury, Venus and Earth are the nearest planets from the Sun in that order).

These celestial events are significant because of a couple of reasons. First, this is only during these transits when we can view Mercury in the sky. Secondly, these events help determine the distance of our Earth from the Sun. It’s true that we already know those distances, but they are still approximations to some extent. Every time these transits happen, interplanetary distances are further fine-tuned. Also, once any one distance gets known, it becomes easier to tell the distance of other planets from the Sun.

Fine tuning of the distances between the Sun and other planets is very important. Cassini and his fellow scientists determined the distance

between Earth and Sun at 87 million miles. Now the same distance is readjusted as 93 million miles. We owe these accuracies to these transits. Scientists measure those distances by observing the transits from different points on earth. The distance between the points of observations

combined with the transit time of the planet in front of the Sun permits accurate calculation of the distance of the planet Earth from the Sun.

(You may do your own research to find out the math behind this). A similar method used in 1771 determined the distance between Earth

and the Sun to be 95 million miles. (Now this is adjusted to 93 million miles).

More significantly, in the future, the distance between the Sun and its planets will keep on increasing because our Sun is constantly losing energy and hence it’s mass, which allows the planets to move to larger orbits. This is not a good news for us earthlings, but we’ll keep on refining interplanetary distances through these transits as long as we’ll walk on the terra firma.

