Mercury rising: planet completes rare transit of Sun

May 10 2016, by Pascale Mollard

Mercury (black dot upper left) is seen passing in front of the sun through a solar telescope in Guwahati, India on May 9, 2016

Astronomers celebrated Monday witnessing one of the highlights of the skywatchers' year, when the Sun, Mercury and Earth all lined up—a phenomenon that happens just a dozen or so times per century.

Mercury was seen through telescopes as a black dot inching over the face of our star, providing a celestial spectacle lasting seven and a half hours.

"It's something rare, because it requires the Sun, Mercury and Earth to be in almost perfect alignment," said Pascal Descamps of the Paris Observatory.

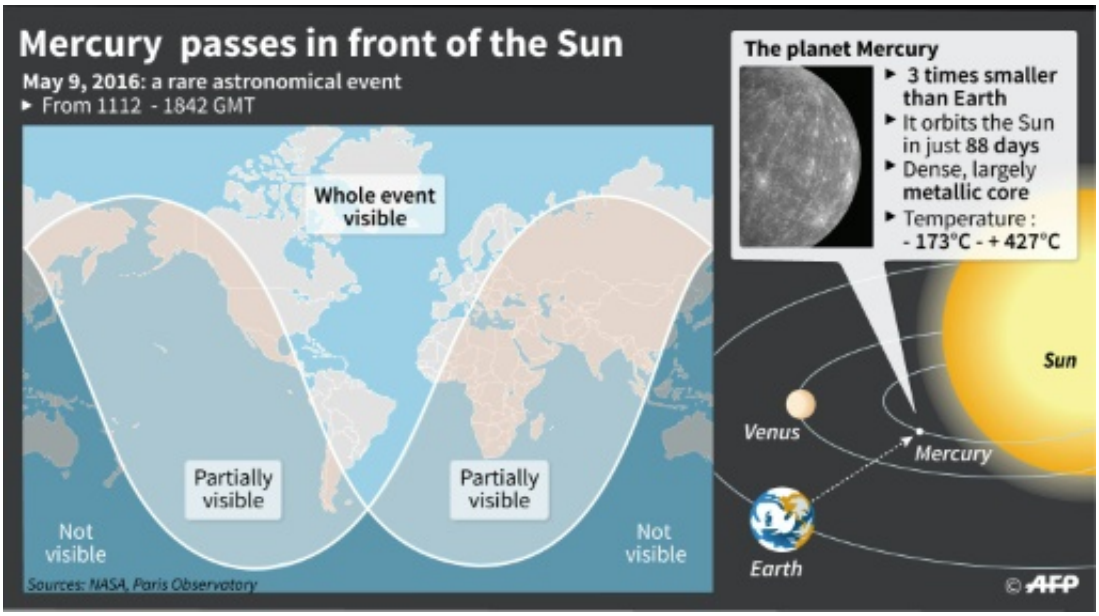
The smallest recognised planet in the Solar System, Mercury completes an orbit every 88 days, and passes between the Earth and the Sun every 116 days.

But its orbit is tilted in relation to Earth's, which means it usually appears—from our perspective—to pass above or below the Sun.

Thirteen times each century, however, the two orbits align such that even amateur astronomers can see the tiny planet tens of millions of kilometres away.

According to Britain's Royal Astronomical Society (RAS), most of Western Europe, the western parts of North and West Africa, eastern North America, and most of South America was able to view the entire transit, which lasted from 1112 GMT to 1842 GMT.

Amateur star-gazers were warned ahead of time to beware while watching the event, as looking directly at it could have caused permanent eye damage, since only a very small part of the Sun was blocked out.



Mercury passes in front of the Sun

One option was to use a telescope or binoculars to project the image onto a white surface, or use a telescope with a strong filter. Or—most safely of all—on the Internet.

"Ordinary people were clearly excited—a lot of people logged on," Descamps told AFP.

Hot and cold

The closest planet to the Sun and a third the size of Earth, Mercury is one of the Solar System's curiosities.

Stargazers set up to watch Mercury moving across the face of the sun at the Royal Observatory in Greenwich, England on May 9, 2016

It is one of the four rocky planets of the inner Solar System but has no atmosphere and its metallic body is scarred by collisions from space rocks.

Daytime on Mercury is six times hotter than the hottest place on Earth, and nighttime can be more than twice as cold as the coldest place on our planet.

It rotates so slowly—three times for every two orbits—that, bizarrely, Mercury's day is twice as long as its year.

The transit of Mercury was first recorded by French astronomer Pierre Gassendi. He observed it through a telescope in 1631, two decades after

the instrument was invented.

German astronomer Johannes Kepler had correctly predicted that transit, but died in 1630 before he could witness the event.

The last Mercury lineup was 10 years ago, and the next will be in 2019, followed by 2032 and 2049.

"It is always exciting to see rare astronomical phenomena such as this transit of Mercury," said RAS President Martin Barstow. "They show that astronomy is a science that is accessible to everyone."

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