

PICTURES: Transit Of Venus On June 6, 2012

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AsianScientist (Jun. 6, 2012) - For the last time this century, people across the globe watched an exciting celestial drama on Tuesday evening and Wednesday morning - the Transit of Venus.

The next event is predicted to take place 105 years later on December 11, 2117.

According to NASA, the transit took place when Venus passed across the face of the sun, producing a silhouette "that no one alive will perhaps see again."

Those in North and Central America and the northernmost parts of South America witnessed the transit just before sunset on Wednesday.

Based on initial reports in China, North and South Korea, Australia, Nepal, and certain parts of India, the transit was clearly visible on Wednesday.

In India's commercial capital, Mumbai, however, it was a complete washout because the pre-monsoon clouds had blocked the view of the sun completely, disappointing hundreds who had gathered from the early hours of the day at the Nehru Planetarium, the Nehru Science Center, and places selected by Khagol Mandal, which represents the largest organization of amateur astronomers in the city. The planetarium had also arranged a live webcast of the event.

All these organisations had installed telescopes in their premises for the benefit of the public. In addition, a private organization had sold nearly 3,000 solar filters near Nehru Planetarium to the public recently to enable them to witness the event safely.

People staying in the Arctic, the Western Pacific, and East Asia witnessed the entire transit without any difficulty.

The transit was the seventh event since the invention of the telescope nearly 400 years ago.

A Venus transit occurs four times approximately in 243 years. They take place in pairs each separated by about eight years. These pairs are separated by about 105 or 121 years. The last Venus transit took place on June 8, 2004.

The long gap is because the orbits of Venus and earth do not lie in the same plane. A transit can only take place if both the planets - earth and Venus - and the sun are situated on one line.

According to NASA, the Solar Dynamics Observatory spacecraft carried out studies to calibrate its instruments as well as to learn more about Venus's atmosphere during the transit. It also transmitted fantastic pictures of the transit.

Milind Kale, program organiser of Khajol Mandal, explained to *Asian Scientist Magazine* that the transit occurs when Venus has its orbit around the sun which is smaller than the orbit of the earth.

"The inclination of Venus' orbit at that time makes it favorable for the public to view the transit," he said.

Venus transit helps to calibrate distances between planets

NASA states that the Transit of Venus first gained worldwide attention in the 18th century. In those days, the size of the solar system was one of the biggest mysteries of science. The relative spacing of planets was known, but not their absolute distances.

Edmund Halley, the world famous astronomer has been quoted as saying that Venus helped in solving this issue. The idea galvanized scientists to launch expeditions around the world to view a pair of Venus transits in the 1760s.

John Philip Souza, the great American musician who lived from 1854-1932 and who was very interested in the 1882 Transit of Venus, composed the Venus Transit March which was played in many parts of the United States on Wednesday evening as people had the first glimpse of Venus entering the sun. The march was composed to honor U.S. physicist Joseph Henry who died on May 13, 1878.

Explaining the importance of the transit, Nehru Planetarium director Arvind Paranjpye said that historically it was important "because it helps in providing a deeper understanding of the universe and also helped in estimating the distance between the earth and the sun more than a century ago."

While regretting that it was a washout in Mumbai on Wednesday, he said it did trigger a lot of excitement among the people who reached the planetarium from the early hours of the day which in turn helped to spread scientific awareness.

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