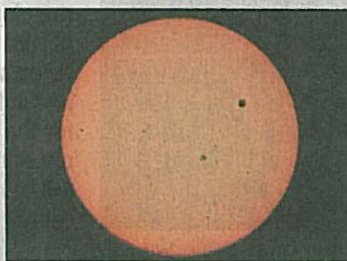


VENUS in VIEW in front of sun



MARK J. TERRILL/Associated Press

Rain stops, clouds part, spectators at Clark College see rare astronomical event



Sean Alix, center, 20, gazes skyward to watch Venus pass across the face of the sun. Alix said that he was having a hard time seeing the event with the cloud cover. The skies later cleared to reveal the astronomic spectacle. Top: Venus, the small black dot on the right, passes between the Earth and the sun, as seen through a telescope in Simi Valley, Calif.

ZACHARY KAUFMAN/The Columbian

By JACQUES VON LUNEN
Columbian staff writer

On Dec. 7, 1882, a New York City newspaper proclaimed that those who, "through smoked glasses ... caught a glimpse" of the sun the day before, had "witnessed one of the rarest and most important of astronomical events."

On the Web:
To read articles on the transit from the 1800s, go to <http://venustransit.nasa.gov/2012/articles>

The reporter from *The Sun* was not exaggerating. The phenomenon visible in the skies above New York 17 years after the end of the Civil War did not repeat again in this part of the world until Tuesday.

This time, instead of through smoked glasses, a crowd gathered at Clark College was able to see the planet Venus cross in front of the sun through specially rigged telescopes.

For much of the day, the gray skies appeared poised to spoil the fun. Venus was expected to move in front of the sun shortly after 3 p.m.



ZACHARY KAUFMAN/The Columbian

Michelle Pitel, 20, who is a student of Clark College astronomy and science teacher Dick Shamrell, holds a clipboard with an image of the sun projected onto it as Venus passes across the sun's face Tuesday. Intermittent clouds and rain didn't deter folks from trying to see the rare event.

"This is a privilege. Thank you, Mother Nature, for making the sun come out."

Dick Shamrell
Physics and astronomy instructor at Clark College

Venus

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At 2:45 p.m., a torrential downpour soaked the spectators gathered by the Chime Tower on the Clark campus, where science instructors had set up telescopes.

But as if on cue, the clouds parted minutes after 3 p.m. to reveal a black dot entering the sun's halo. "This is a privilege," said Dick Shamrell, a physics and astronomy instructor at Clark who was manning a telescope projecting the spectacle onto a white sheet of paper. "Thank you, Mother Nature, for making the sun come out."

It took about six hours for Venus to march across the face of the sun. Shamrell planned to stay by his telescope for the duration. It was a once-in-a-lifetime event, after all.

The sun, Venus and Earth lined up the same way in 2004, but did so while it was nighttime in the Western Hemisphere.

The star and its planets will be in the same constellation again in 105 years.

"Tell your children about this," Shamrell said. "They won't get a chance to see this, but they can tell their children, who will see it."

The Venus transits in the 1700s and 1800s were milestones for science, because they allowed researchers and mathematicians to calculate the distance between the Earth and the Sun.

Expeditions fanned out across the world to record observations of the phenomenon. Scientists knew that Venus was three-quarters of the way between Earth and Sun and that it was about the same size as Earth.

By comparing the measurements taken at different points on Earth,



ZACHARY KAUFMAN/The Columbian

scientists could finally triangulate the actual distances, Shamrell said.

The image of Venus in front of the Sun is a little fuzzy around the edges,

Pouring rain made it seem all but impossible that the Venus transit would be visible. But the clouds parted Tuesday just in time for the once-in-a-lifetime event.

which created inaccuracies in the measurements.

"But they got it in the ballpark," Shamrell said.

Those numbers were used well into the 20th century. Tuesday, the Hubble Space Telescope used the event to measure the change in light bouncing off the Earth's moon. Scientists will use the measurements to make assumptions about planets in other solar systems as they pass in front of their stars.

The astronomical event can be a teaching moment not just for science, but for philosophy, Shamrell said.

"This is a great illustration of how big the Earth is in relationship to the Sun," he told the spectators. "It gives us a sense of scale, a sense of where we fit in the universe. That's what we do in astronomy."

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