

The Transit of Venus: Harvard 18th and 19th Century Student Predictions

Between 1792 and 1825, Five Students Calculated 1874 and 1882 Transits

June 4, 2012—Twice every century, Venus passes directly between Earth and the Sun, appearing as a small black dot on the Sun's disk.

In 1716, Edmund Halley exhorted his astronomers to time these "transits of Venus" in order to measure the solar system. Captain Cook and other 18th century explorers traveled to far corners of the earth to make observations.

Between 1792 and 1825, five Harvard College students presented calculations for the transits predicted to take place in 1874 and 1882, and their work is preserved among the Harvard University Archives' [collection of 18th and 19th century student mathematical theses](#). Four students presented calculations for the transit predicted to take place in 1874, and one student presented two sets of calculations for the transit predicted for 1882.

It wasn't until the 1874 and 1882 transits occurred that instruments had advanced sufficiently to obtain observations for a truly accurate calculation of 93,000,000 miles between the earth and the sun.

The Harvard student theses:

1. [1792 thesis on 1874 transit](#)

Webster, Stephen P. (Harvard College Class of 1792). A Calculation and Projection of a Transit of Venus over the Sun, Dec. 9th, 1874.

2. [1808 thesis on 1874 transit](#)

Holbrook, Moses (Harvard College Class of 1808). Calculation and Projection of a Transit of Venus over the Sun's Disc, December, 1874.

3. [ca. 1822 thesis on 1874 transit](#)

[Unidentified author. 1822?]. Transit of Venus for 1874.

4. [1825 thesis on 1874 transit](#)

Treadwell, John G. (Harvard College Class of 1825). Computation of the Effect of Parallax on the Transit of Venus in 1874, for Lat. 23° 22' 34" N.; and Lon. 113° 16' E

5. [1825 thesis on 1882 transit](#)

Walker, Sears Cook (Harvard College Class of 1825). Mathematical theses. Transit of Venus in 1882.

6. [1825 thesis on 1882 transit \(same author as above\)](#)

Walker, Sears Cook. The Effect of Parallax upon the Transit in 1882.