



# US Naval Observatory Expeditions

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In 1874 and 1882, the [US Naval Observatory](#) (USNO) sent multiple teams to time the transit of Venus with the aid of photographic equipment. Expedition photographs reproduced here are in the collection of the US Naval Observatory Library.



sawhorse 1415



whaler 01416



skiff 01419



seal 01430



camp



boy 01418



sighting 01423



5observers



man 01417



observatory 01429



tripod 01431



anchor



hutfield



brooklyn 01406



practice\_obs 01401



ship 01402

The images below were digitally photographed at an open table, so the quality is somewhat compromised and reflections occasionally appear. That said, most of the pictures to which you can link remain as large jpeg files.



patagonia 1405



macabre 01412



wiring 01425



station 01411



vladivostok 01407



scope inside 01414



brickhouse 01426



low-water 01413



instrument 01393



barrel\_seat 01420



inlet 01427



group 01389



rig 01410



bird 01421



vlads 01408



helio 01392



heliometer 01395



multihuts 01397



helio\_pier 01399



old\_site 01400



tent 01403





waterside 01437



bighat 01436



couple 01435



barrelrack 01434



stump 01433



chatham\_shed 01432

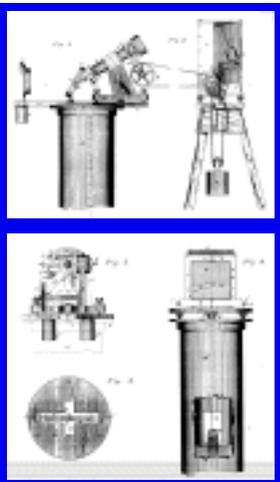


Additional images from the George Eastman House Still Photograph Archive are available at [http://www.geh.org/ar/strip47/htmlsrc/lanternsld\\_sum00040.html](http://www.geh.org/ar/strip47/htmlsrc/lanternsld_sum00040.html). Shown is "Transit of Venus Huts erected at Naval Observatory; transparency, collodion on glass."



<http://justfurfun.org/astrohtml/heliostat.htm>

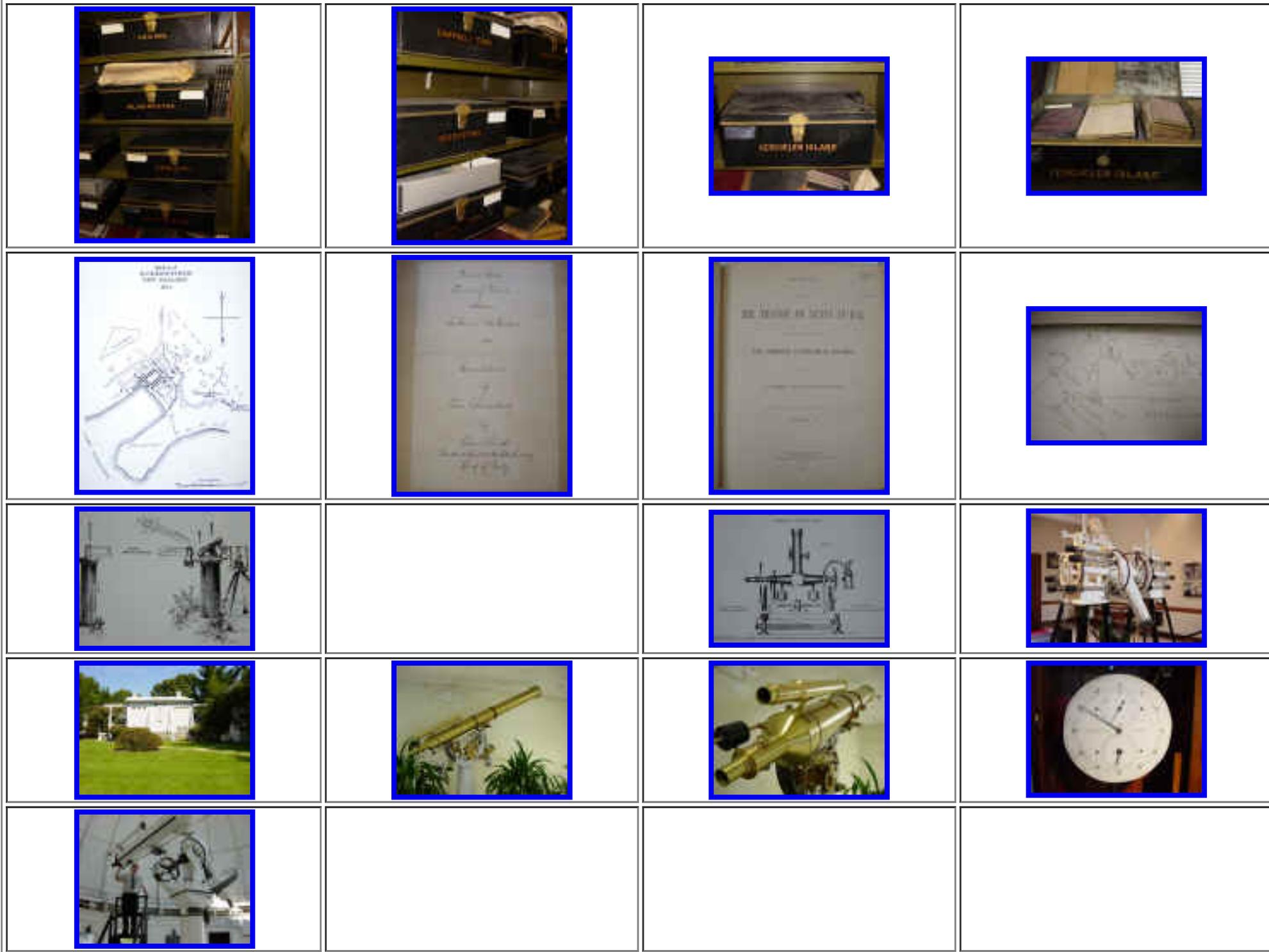
An original heliostat from the USNO expeditions; in a private collection.



Diagrams of heliostats from the USNO expeditions; images provided by Robert Havlik.

Below are images of the [US Naval Observatory](#) in Washington, D.C.





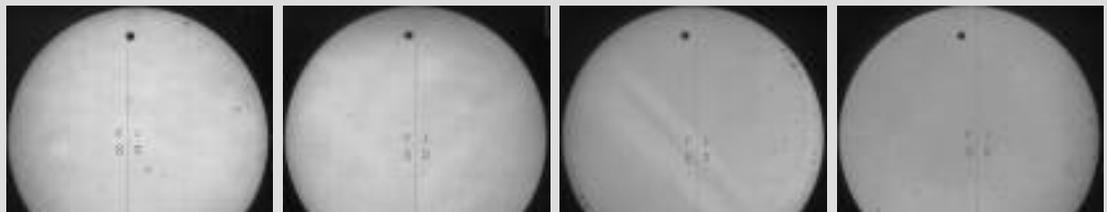
Additional USNO artifacts can be viewed at <http://216.239.51.100/search?q=cache:bHpjbTa1IUCJ:www.usno.navy.mil/library/artwork/artwork.html+transit+of+venus+1874&hl=en&ie=UTF-8>.

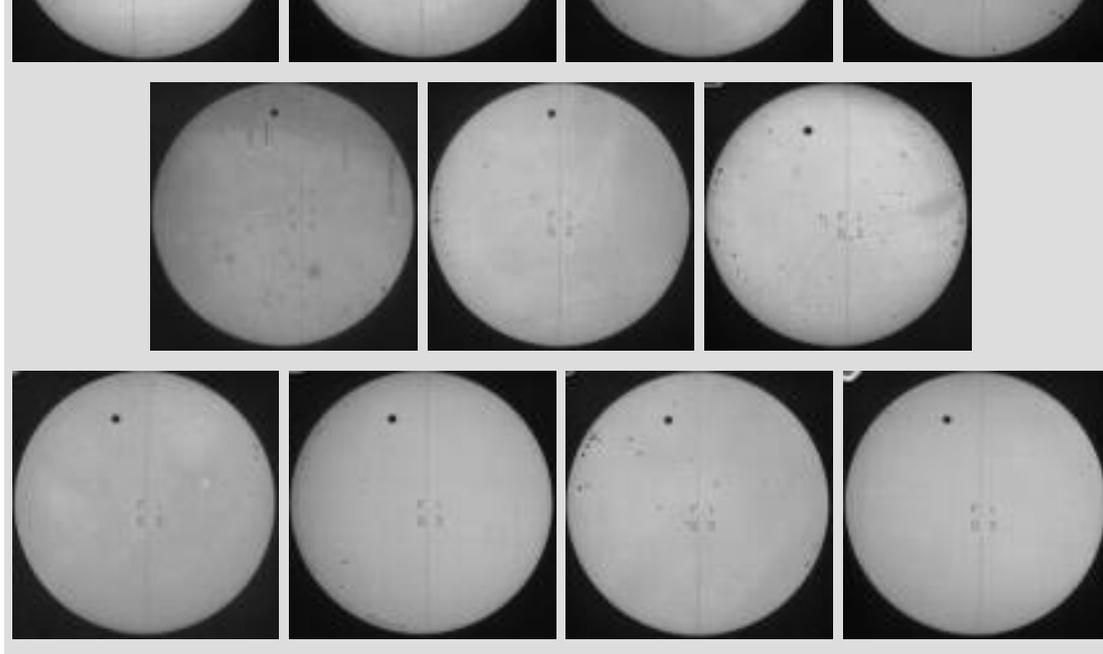
The following [text and images](#) are courtesy of the U.S. Naval Observatory Library; used with permission.

## Transit of Venus Plates

Transit of Venus Plates - 1882  
 The site where these plates were taken is unknown.

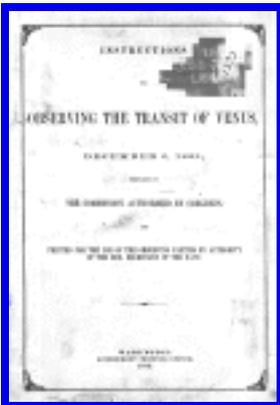
Images from photographic plates of the Transit of Venus (Venus crossing the face of the Sun), a very rare phenomenon that last occurred in 1874 and 1882. Wet bromo-iodide plates were used in 1874, but by 1882 dry collodion emulsion plates were available. The Naval Observatory and Transit of Venus Commission sent 8 parties around the world to observe each of the transits; the results were important for determining the scale of the solar system. Only 11 plates survive from the American 1882 expeditions; none of the plates from the American 1874 transit expeditions has survived. The next transits of Venus occur in 2004 and 2012.





For details of and more images from the 19th century USNO expeditions, either [buy](#) "The U. S. Naval Observatory And the American Transit of Venus Expeditions of 1874 and 1882," *Sky and Ocean Joined: The U. S. Naval Observatory, 1830-2000* by Steven J. Dick (Cambridge University Press, 2003), or [see online](#) Chapter 7 from the book.

Thanks go to Brenda Corbin and Steven Dick for their kind assistance at the US Naval Observatory.



In preparation for the 1882 transit of Venus expeditions, the United States Naval Observatory printed a publication listing the detailed duties of each member of the expedition team. (See "[Instructions](#)" page.) Based on the experiences of the 1874 expeditions eight years prior, the book explains what the observer may expect to see and how to discern the instant of contact.

[www.transitofvenus.org](http://www.transitofvenus.org)

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