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US Naval Observatory Expeditions

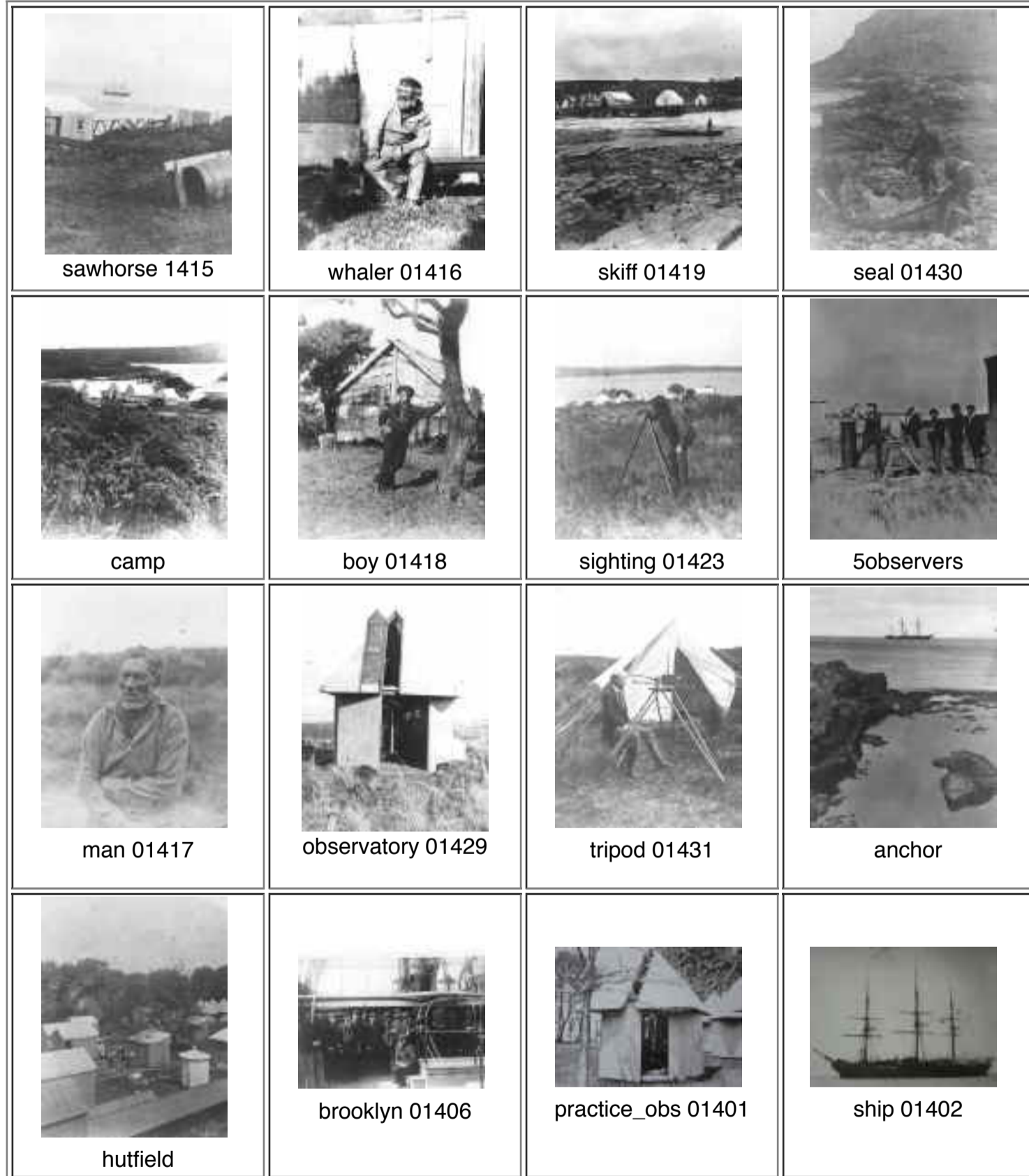


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In 1874 and 1882, the **US Naval Observatory** (USNO) sent multiple teams to time the transit of Venus with the aid of photographic equipment. Expedition photographs reproduced here are in the collection of the US Naval Observatory Library.


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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.



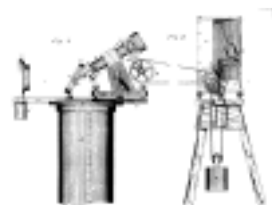
patagonia 1405	macabre 01412	wiring 01425	station 01411
 vladivostok 01407	 scope inside 01414	 brickhouse 01426	 low-water 01413
 instrument 01393	 barrel_seat 01420	 inlet 01427	 group 01389
 rig 01410	 bird 01421	 vlads 01408	 helio 01392
 heliometer 01395	 multihuts 01397	 helio_pier 01399	 old_site 01400
 tent 01403	 waterside 01437	 bighat 01436	 couple 01435
 barrelrack 01434	 stump 01433	 chatham_shed 01432	



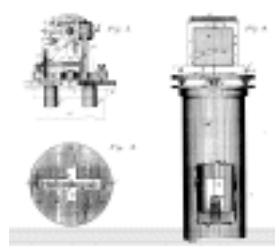
Additional images from the George Eastman House Still Photograph Archive are available at http://www.geh.org/ar/strip47/htmlsrc/lanternsld_sum00040.html. Shown is "Transit of Venus Huts erected at Naval Observatory; transparency, collodion on glass."

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

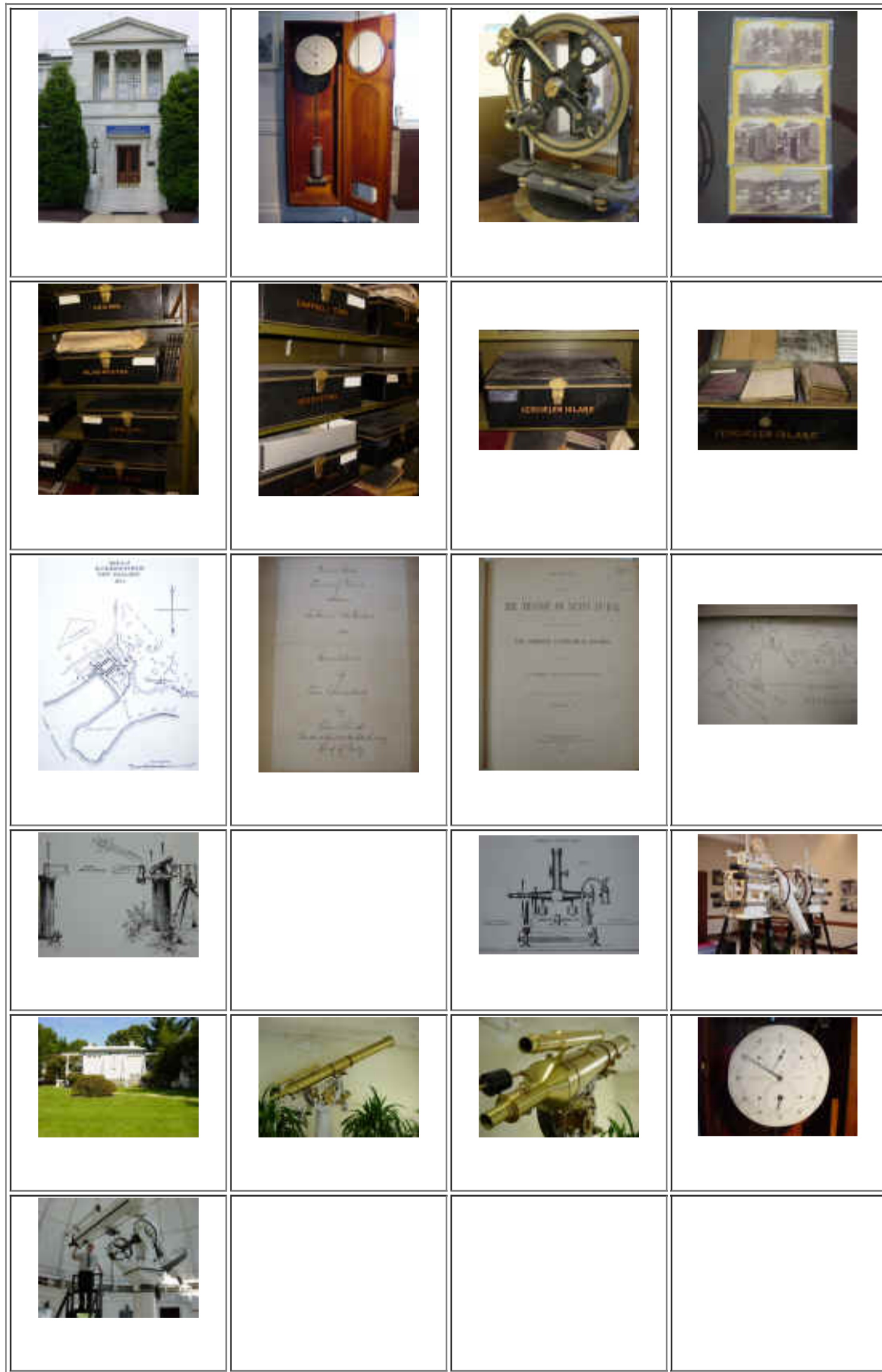
An original heliostat from the USNO expeditions; in a private collection.



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



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



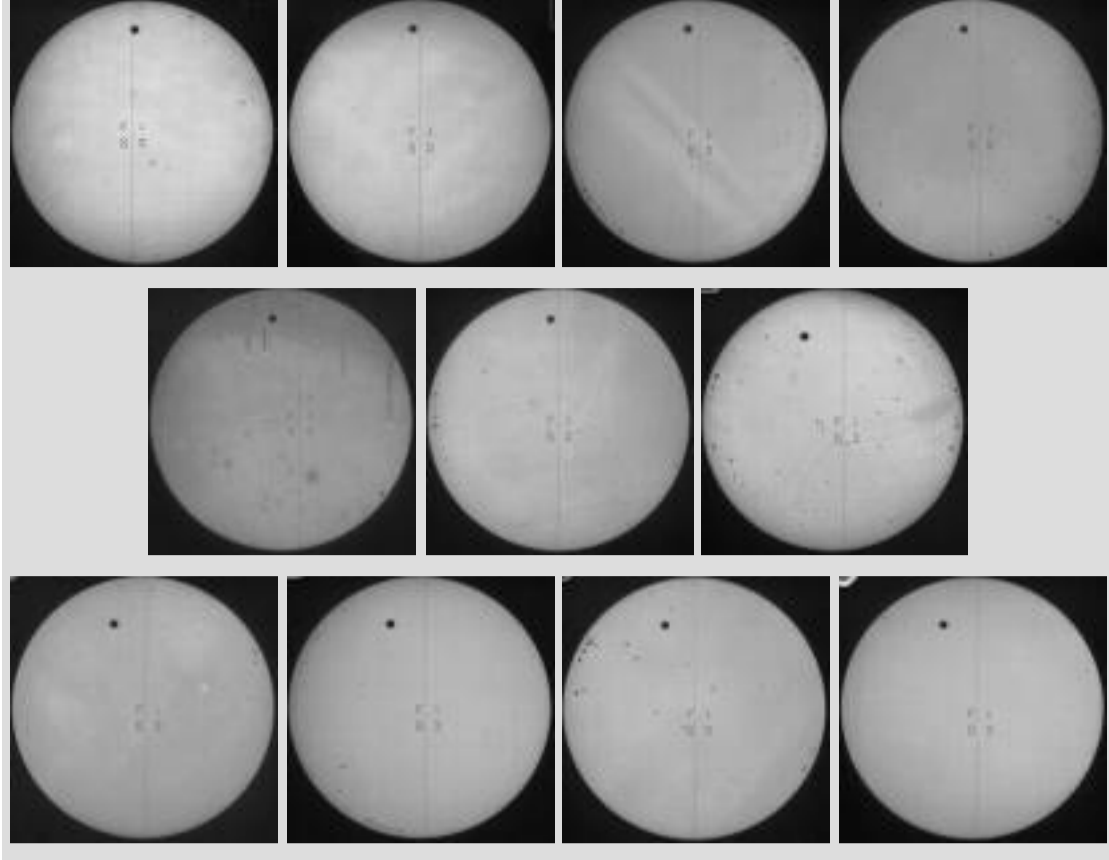
The following [text and images](#) are courtesy of the U.S. Naval Observatory Library; used with permission.

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.

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