

## What's New? - 2004

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### Year 2004

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|-------------|---|
| December 13 | <p>Links added to "<b>June 8</b>" page:<br/> <a href="http://www.physics.nd.edu/venus%20at%20phm/index.htm">http://www.physics.nd.edu/venus%20at%20phm/index.htm</a><br/>           University of Notre Dame physics students watch the transit of Venus from the PHM site in Mishawaka, IN.</p>  |
|             | <p>New <b>Lighting Issues</b> page added:<br/> <a href="#">lights.htm</a><br/>           Addresses light pollution issues, with particular reference to northern Indiana.</p> <p>New "<b>Google</b>" page added:<br/> <a href="#">google.htm</a></p> <ul style="list-style-type: none"> <li>The Google Zeitgeist feature lists the transit of Venus as <i>the single most popular event</i> for the month of June, 2004.</li> <li>New Google search engine added to multiple pages; features the ability to search just this website for pages that have been crawled by Google. Please note that recently added items may take a few weeks to appear on the search results.</li> <li>Google artists kindly recognize the transit of Venus on their June 8, 2004, banner.</li> </ul> <p>Links added to "<b>Music</b>" page, "<b>Sousa</b>" page, and "<b>Peace</b>" page:</p> <ul style="list-style-type: none"> <li><a href="http://www.transitofvenus.org/phmband-intro.mp3">http://www.transitofvenus.org/phmband-intro.mp3</a><br/>             Megan Dowell, Family Readiness Leader of the 428th MP Company, and Chuck Bueter introduce John Philip Sousa's <i>Transit of Venus March</i> at the Spring Band Concert; (audio only).</li> <li><a href="http://www.transitofvenus.org/phmband.mp3">http://www.transitofvenus.org/phmband.mp3</a><br/>             The PHM Band performs John Philip Sousa's <i>Transit of Venus March</i> at the Spring Band Concert; (audio only).</li> </ul> <p>Link added to "<b>2012</b>" page:<br/> <a href="http://home.hetnet.nl/~smvanroode/">http://home.hetnet.nl/~smvanroode/</a><br/>           Details and prospects for the 2012 transit; courtesy of Steven M. van Roode.</p> <p>Links added to "<b>Images</b>" page:</p> <ul style="list-style-type: none"> <li><a href="http://members.rogers.com/science_sdc/science_photos/slides/transit_venus_chart.html">http://members.rogers.com/science_sdc/science_photos/slides/transit_venus_chart.html</a><br/>             Series of photographs from Ontario, Canada; courtesy Shawn Connelly.</li> <li><a href="http://w1.217.telia.com/~u21702585/venus.htm">http://w1.217.telia.com/~u21702585/venus.htm</a><br/>             Images of Venus preceding June 8th culminate with transit of Venus images; courtesy H.G. Lindberg.</li> </ul> <p>Images added to "<b>June 8</b>" page:</p> <ul style="list-style-type: none"> <li><a href="#">afterglow.jpg</a><br/>             Image courtesy of Cathy McCormick.</li> <li><a href="#">aligning.jpg</a></li> <li><a href="#">darnell.jpg</a></li> <li><a href="#">lapierre.jpg</a> Image(s) courtesy of Don Darnell.</li> </ul> <p>Added to "<b>Art</b>" page:<br/> <a href="#">art.htm</a>:</p> <ul style="list-style-type: none"> <li>New table lists names of participating artists, their medium, and the title of their artwork.</li> <li><a href="#">glance.jpg</a> Image of gallery owners and art exhibit hosts, Lenore and Jennifer</li> </ul> |
| November 30 | <p>Added to "<b>PHM Planetarium &amp; Air/Space Museum Gallery</b>" page:<br/> <a href="#">phm/gallery.htm</a><br/>           Images show families observing the total lunar eclipses of November 8, 2003, and of October 27, 2004.</p>   |

Link added to "**Music**" page:

<http://johnwesleybarker.madasafish.com/compositions/transitofvenus.html>

*Transit of Venus for Flutes* includes a solo study, a flute duet, and a concerto version, which commemorate the transit of Venus while noting the presence of flutes in the South Pacific as recorded by James Cook's expedition; from John Wesley Barker.

Link added to "**Spacecraft**" page:

<http://www.spaceref.com/news/viewpr.html?pid=14873>

Press release (August 24, 2004): "Network of small telescopes discovers distant planet (TrES-1)." Image courtesy of NASA JPL.

Link added to "**Science & Math**" page:

<http://www.phy6.org/stargaze/Svenus2.htm>

"Approximate calculation of the AU based on the June 8 transit of Venus, meant for the level of high school or beginning college and uses only algebra and simple trigonometry. It only relies on simulated data--specifically, predicted times of 2nd and 3rd contact for Cairo and Durban;" from David P. Stern.

Link added to "**Safety**" page:

<http://www.rongross.com/misc/solarview/>

Projection device from a simple heliostat; from Ron Gross.

Link corrected on "**Music**" page and "**Sousa**" page:

<http://www.wgpark.com/page.asp?pid=10>

Email feedback added to "**Black Drop**" page:

- "...Placing a small black circle inside and just in contact with a large white one (on a black background), I found that the degree of black drop increased when I zoomed out and decreased when I zoomed in. Likewise, viewing the screen from a distance I found that the black drop effect increased as I moved further away. I then reversed the colours of the image and produced an corresponding 'white drop effect'...Try this test: open the [blackdrop.gif](#) file . If you zoom in you will see that there is a distinct white separation between the two circles. As you zoom out this becomes less visible, and by zooming out (say) 8 times a marked black drop effect appears..." Courtesy of John Rushby-Smith.

Links added to "**Miscellaneous**" page:

- <http://s87767106.onlinehome.us/art/TransitOfVenus.jpg>  
Oil painting metaphorically depicts "Venus transiting the Sun (which doubles for a halo around an angelic/Luciferian Venus). The embodiment of Venus is sweeping her shield across the sword of war, as she flies over the 'Field of Mars', breaking the sword's blade and sending debris out over the city--the debris turning into flowers and peace." Courtesy of Stephen Marc Fox.
- [http://abclocal.go.com/wls/news/collectioncorner/083104\\_cc\\_birdhouses.html](http://abclocal.go.com/wls/news/collectioncorner/083104_cc_birdhouses.html)  
News story: "Painter James Mesplé paid tribute to the recent Transit of Venus across the sun with his birdhouse made of antique barn wood and decorated with paintings and ceramic figures of Venus." Birdhouse was an auction item to benefit the Clarke House Museum, Chicago's oldest house.

August 17

Link added to "**June 8**" page:

[davis-report.htm](#)

Brian Davis writes a descriptive [observing report](#) about his experience celebrating the transit of Venus in Mishawaka, IN.

Links added to "**Images**" page:

- <http://astrosurf.com/rondi/venus2004/>  
Photographs and movies with homemade H-alpha coronagraph of Venus straddling the sun's limb; from André Rondi.
- [images.htm](#)  
John and Linda Hare share their transit of Venus images from the Royal Observatory in Greenwich, England.
- <http://antwrp.gsfc.nasa.gov/apod/ap040717.html>  
July 17, 2004: Transit of Venus Stereogram

Links added to "**Black Drop**" page:

<http://www.metaresearch.org/home/Viewpoint/blackdrop.asp>

In noting "an irradiation effect – the apparent spreading of light from bright areas onto any adjacent dark areas," author Tom Van Flandern asserts that the well-understood black drop effect "provides a timing advantage rather than a disadvantage."

Link added to "**Historical**" page:

<http://www.nojum.net/articles/venustransit/history/>

Pouria Nazemi asserts in *Nojum, The Astronomy Magazine of Iran* that the Persian Islamic scientist Avicenna witnessed the 1032 transit of Venus. Avicenna claims in his book *Shifa*, "I say that I have seen Venus as a spot on the Sun's face."

Link added to "**Education**" page:

[http://ds9.ssl.berkeley.edu/vteval/web\\_survey.aspx](http://ds9.ssl.berkeley.edu/vteval/web_survey.aspx)

The Sun-Earth Connection solicits feedback on NASA's services provided for the 2004 transit of Venus. Respondents to the survey receive free Sun-Earth Connection posters.

June 27

Link added to "**Science & Math**" page:

<http://www.astro.uni-bonn.de/~dfischer/skyreports/2004/venus.html>

*The Astronomical Unit from differential astrometry of the 2004 Transit of Venus?* by Daniel Fischer. "Based on a handful of medium-quality photographs of the full solar disk taken during the 2004 transit of Venus, a first attempt to derive the AU by relative astrometry to two sunspots in AR 627 is made."

Links added to "**Images**" page:

[http://soho.nascom.nasa.gov/hotshots/2004\\_06\\_08/](http://soho.nascom.nasa.gov/hotshots/2004_06_08/)

**Hot Shots** for June 8, 2004, features movies of eruptive sun, with Venus passing below the sun from the SOHO spacecraft's perspective. Text notes how the transit of Venus improved the accuracy of SOHO by measuring the stray light coming from the solar disk that usually scatters inside the spacecraft's instrument.

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| June 22 | <ul style="list-style-type: none"> <li>• <a href="http://soho.nascom.nasa.gov/hotshots/2004_06_08/frames/">http://soho.nascom.nasa.gov/hotshots/2004_06_08/frames/</a><br/>SOHO captures Venus ducking below the sun; <b>shown</b> is 284A at 16:15.</li> <li>• <a href="http://soho.nascom.nasa.gov/hotshots/2004_06_08/frames/20040608_1012_tran_171.gif">http://soho.nascom.nasa.gov/hotshots/2004_06_08/frames/20040608_1012_tran_171.gif</a><br/>What looks like a scuba diver's view upward--or the opening of the firmament above--is a numerologist's gem. From the SOHO spacecraft at 2004-06-08 10:12.</li> </ul> <p>Images added to "<a href="#">U.S. Naval Observatory</a>" page:<br/> <a href="#">usno-heliostat1.gif</a><br/> <a href="#">usno-heliostat2.gif</a><br/> Diagrams of heliostats from the USNO expeditions; provided by Robert Havlik.</p>  |
| June 21 | <p>Links added to "<a href="#">Images</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.ocmboces.org/iss/mstsite/Graphics1/transitposter.jpg">http://www.ocmboces.org/iss/mstsite/Graphics1/transitposter.jpg</a><br/>A poster from OCM BOCES shows a collage of images from Syracuse, New York, USA; courtesy of Susan Button.</li> <li>• <a href="http://www.astronomycafe.net">www.astronomycafe.net</a><br/>A diary of the journey to webcast the transit of Venus from Greece; includes cultural experiences, the day of the transit itself, plus a post-mortem; from Sten Odenwald.</li> </ul>   |
| June 20 | <p>Links added to "<a href="#">Images</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://atm.zaciatok.sk/atm/atm.nsf/0/0F3E5E0223691EF4C1256EB50034B66F?OpenDocument">http://atm.zaciatok.sk/atm/atm.nsf/0/0F3E5E0223691EF4C1256EB50034B66F?OpenDocument</a><br/>Tomáš Maruška and the Porter team capture the International Space Station transiting the sun from Bratislava. The handiwork of <a href="#">Thomas Fly</a> and others sets up successful images of both the <a href="#">observers</a> and the <a href="#">observed</a>.</li> <li>• <a href="http://www-personal.umich.edu/~jimsmith/venus/">http://www-personal.umich.edu/~jimsmith/venus/</a><br/>James Smith shares his images.</li> <li>• In Statesboro, GA, observers with the Georgia Southern Planetarium overcome heavy fog to capture the transit. Images and comments courtesy of Becky Lowder.</li> </ul>   |
| June 17 | <p>Links added to "<a href="#">Images</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.hplfoundation.org/astronomy_night_events_transit_of_venus_photos.htm">http://www.hplfoundation.org/astronomy_night_events_transit_of_venus_photos.htm</a><br/>A crowd observes along the lakefront by the Adler Planetarium in Chicago, Illinois, USA; from Hinsdale Public Library Foundation.</li> <li>• <a href="http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/TRANSIT_04/TRACE/TOV_TRACE_INGRESS.html">http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/TRANSIT_04/TRACE/TOV_TRACE_INGRESS.html</a><br/>More newly processed images from TRACE.</li> <li>• <a href="http://www.inquinamentoluminoso.it/download/mondo_ridotto0p25.gif">http://www.inquinamentoluminoso.it/download/mondo_ridotto0p25.gif</a><br/>Some parts of the world missed the transit of Venus simply because of darkness--the sun never got above the horizon during the 6+ hours of transit time. Images from CONCAM project and Light Pollution Science and Technology Institute.</li> <li>• <a href="http://astrosurf.com/rondi/venus2004/">http://astrosurf.com/rondi/venus2004/</a><br/>Sequence of images by Andre Rondi shows Venus moving beyond the solar limb.</li> <li>• <a href="http://gong.nso.edu/venus2004/">http://gong.nso.edu/venus2004/</a><br/>Overlay of the path of Venus as seen from multiple sites; from the Global Oscillation Network Group (GONG).</li> <li>• <a href="http://www.astro.uni-bonn.de/~dfischer/mirror/277.html">http://www.astro.uni-bonn.de/~dfischer/mirror/277.html</a><br/>Daniel Fischer's <i>The Cosmic Mirror</i> links to transit of Venus image galleries, press releases, individual reports, and media coverage.</li> <li>• <a href="http://dot.astro.uu.nl/DOT_Venus.html">http://dot.astro.uu.nl/DOT_Venus.html</a><br/>Dutch Open Telescope</li> <li>• <a href="http://iota.jhuapl.edu/venus615.htm">http://iota.jhuapl.edu/venus615.htm</a><br/>David Dunham's account of his trip to Springs, Pennsylvania, USA</li> <li>• <a href="http://fermi.jhuapl.edu/transit2004/index.html">http://fermi.jhuapl.edu/transit2004/index.html</a><br/>Bob Jensen's images from Montpelier.</li> <li>• Sunrise from Venice, Florida, USA</li> <li>• <a href="#">june8.htm</a><br/>50 new images from the Mishawaka, Indiana, USA, celebration of the transit</li> </ul> <p>Links added to "<a href="#">2012</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/Map2012-1.GIF">http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/Map2012-1.GIF</a><br/>World visibility map of 2012 transit of Venus; from Fred Espenak.</li> <li>• <a href="http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/city12-1.html">http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/city12-1.html</a><br/>Contact times (Universal Time) and corresponding altitudes of the Sun for 121 international cities; from Fred Espenak.</li> <li>• <a href="http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/city12-2.html">http://sunearth.gsfc.nasa.gov/eclipse/transit/venus/city12-2.html</a><br/>Contact times (Universal Time) and corresponding altitudes of the Sun for 60 cities throughout the USA; from Fred Espenak.</li> </ul> <p>Links added to "<a href="#">Historic</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.astro.univie.ac.at/~wuchterl/Kuffner/2004/Venustransit/VENUS_Transit1874/Venus33.jpg">http://www.astro.univie.ac.at/~wuchterl/Kuffner/2004/Venustransit/VENUS_Transit1874/Venus33.jpg</a><br/>"Waiting for the Transit of Venus, Eden; Plate XXXVI."</li> <li>• <a href="http://www.harryatkinson.com/">http://www.harryatkinson.com/</a><br/>"The 1882 transit observed in Nelson, New Zealand, by a local astronomer, Arthur Samuel Atkinson, on behalf of the Royal Society."</li> </ul> <p>Link added to "<a href="#">Black Drop</a>" page:<br/> <a href="http://www.astronomy.org.nz/aas/MonthlyMeetings/MeetingApr2003.asp">http://www.astronomy.org.nz/aas/MonthlyMeetings/MeetingApr2003.asp</a><br/> Figure of Black Drop Effect in article by Grant Christie; from Auckland Astronomical Society.</p> |
|         | <p>New "<a href="#">Images</a>" page added:<br/> <a href="#">images.htm</a></p>  |

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| June 15 | <p><a href="#">Images.html</a><br/> <i>Images from the 2004 transit of Venus, including:</i></p> <ul style="list-style-type: none"> <li>• <a href="http://www.vt-2004.org/photos/">http://www.vt-2004.org/photos/</a><br/> Collection of VT-2004 images, including the <a href="#">VT-2004 Photo of the Day</a>; from the European Southern Observatory;</li> <li>• <a href="http://science.nasa.gov/spaceweather/venustransit/gallery_08jun04_page10.htm">http://science.nasa.gov/spaceweather/venustransit/gallery_08jun04_page10.htm</a><br/> Several pages of images from SpaceWeather.com;</li> <li>• <a href="http://www.venusvoordezoon.nl/resultaten/fotoalbum.php">http://www.venusvoordezoon.nl/resultaten/fotoalbum.php</a><br/> Diverse images and video from professional and amateur observers alike;</li> <li>• <a href="http://vestige.lmsal.com/TRACE/transits/venus_2004/">http://vestige.lmsal.com/TRACE/transits/venus_2004/</a><br/> From the perspective of the TRACE spacecraft;</li> <li>• <a href="http://vt-2004.solarphysics.kva.se/movies/">http://vt-2004.solarphysics.kva.se/movies/</a><br/> Swedish 1-m Solar Telescope on La Palma; images and movies include black drop effect and the "elusive aureole outlining the disk of Venus."</li> </ul>  |
| June 10 | <p>New "<a href="#">June 8</a>" page added:<br/> <a href="#">june8.htm</a><br/> A brief report on our transit of Venus experience at Mishawaka, Indiana, USA. We solicit links to your images and we appreciate written descriptions of your own transit of Venus experience. The pace at which material is uploaded to this site will slow down appreciably in the next few weeks.</p>   |
| June 8  | <p>Transit of Venus</p>   |
| June 7  | <p>The weather forecast in northeast Indiana is favorable. We invite you to join our <a href="#">Transit of Venus Celebration</a>, which begins this evening at 6:00 p.m. Eastern Standard Time and continues through the transit of Venus on Tuesday morning. Thank you all for your ongoing support. We wish you clear skies.</p>   |
| June 6  | <p>New "<a href="#">Clouds</a>" page added:<br/> <a href="#">clouds.htm</a><br/> What if cloudy weather threatens your view of the transit? There is always someone who has had it worse...</p>   |
| June 5  | <p>New "<a href="#">Instructions</a>" page added:<br/> <a href="#">instructions.htm</a><br/> For the 1882 transit of Venus expeditions, the <a href="#">U.S. Naval Observatory</a> printed a publication listing the duties of each member of the expedition team. Noting 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.</p> <p>Link added to "<a href="#">Kid Stuff</a>" page:<br/> <a href="#">club.htm</a><br/> New "Club" page displays some of the transit of Venus artwork done by youths from the Boys &amp; Girls Club of St. Joseph County, IN.</p> <p>Update added to "<a href="#">Monument</a>" page:<br/> <a href="#">monument.htm</a><br/> "The stone is about completed, with much late night tapping..."</p>  |
| June 4  | <p>Link added to "<a href="#">Observing</a>" page:<br/> <a href="http://www.xs4all.nl/~carlkop/venus/transit.html">http://www.xs4all.nl/~carlkop/venus/transit.html</a><br/> Large list of webcasts from across the globe, including Astronet's role from Netherlands and Belgium.</p> <p>Note: Due to the number of webcasts being announced, I defer to the lists at <a href="#">Astronet</a> (above) and the European Southern Observatory at <a href="http://www.vt-2004.org/central/cd-links/">http://www.vt-2004.org/central/cd-links/</a>.</p> <p>Added to "<a href="#">Roadtrip</a>" page:<br/> <a href="#">roadtrip.htm</a><br/> New <i>Calendar of Events and Timeline</i> describes the multiple events unfolding at the Mishawaka, Indiana, transit of Venus celebration. Features include planetarium programs, artifacts on display, stargazing, webcasts, sunrise observation of the transit, music, giveaways, and transit of Venus camaraderie.</p> <p>Link added to "<a href="#">Spacecraft</a>" page:<br/> <a href="http://newsrelease.uwaterloo.ca/news.php?id=4098">http://newsrelease.uwaterloo.ca/news.php?id=4098</a><br/> "The Canadian Space Agency satellite SCISAT-1 (ACE) is set to take Venus Transit measurements using its on-board high-resolution Fourier transform spectrometer. SCISAT-1 will observe the transit as part of the ACE studies that are measuring and understanding the chemical processes that control the distribution of atmospheric ozone in the Arctic;" from the University of Waterloo.</p> <p>Link added to "<a href="#">Black Drop</a>" page and "<a href="#">Projects</a>" page:<br/> <a href="http://usna.edu/Users/physics/huddle/Beat%20the%20Black%20Drop.pdf">http://usna.edu/Users/physics/huddle/Beat%20the%20Black%20Drop.pdf</a><br/> Jim Huddle of the U.S. Naval Academy proposes "a variation of Halley's method that avoids the complications of the Black Drop Effect...and requests collaborators to test the method during the transit of Venus on 8 June 2004." Observers simply photograph Venus at fifteen minute intervals, noting the times of the photos. (PDF file)</p> <p>Link added to "<a href="#">Miscellaneous</a>" page:<br/> <a href="http://venustransit.free.fr/">http://venustransit.free.fr/</a><br/> Simulation of Venus crossing the sun in real time (1x) and speeded up (10x and 100x); in Flash.</p> <p>Link added to "<a href="#">Non-English</a>" page:<br/> <a href="http://www.venusvoordezoon.nl/index.htm">http://www.venusvoordezoon.nl/index.htm</a><br/> Live webcast of the Venus transit and a node for online calculation of the Sun-Earth distance.</p> |
|         | <p>New "<a href="#">Monument</a>" page added:<br/> <a href="#">monument.htm</a><br/> Carving is well under way on a new monument by Croston Carvers to local hero Jeremiah Horrocks. In 1639 Horrocks predicted and was the first to observe the transit of Venus from Bretherton, Lancashire, UK.</p> <p>New "<a href="#">Cicadas</a>" page added:</p>   |

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| June 1 | <p>Now <a href="#">Cicadas</a> page added:<br/><a href="#">cicadas.htm</a></p> <p>Sten Odenwald writes: "As the countdown for the Transit of Venus continues, and many of us are counting down for the emergence of the east coast Brood-X cicadas, I was curious how often we get cicadas during a transit of Venus..."</p> <p>Link added to "<a href="#">Black Drop Effect</a>" page:<br/><a href="http://www.phys.uu.nl/~vgent/venus/venus_text2.htm#black%20drop">http://www.phys.uu.nl/~vgent/venus/venus_text2.htm#black%20drop</a></p> <p>Bibliography: <i>The Black Drop and Related Phenomena</i>, from R.H. van Gent.</p> <p>Note: Email service restored (643 messages awaiting).</p>  |
| May 31 | <p>Three notes from Chuck Bueter:</p> <ol style="list-style-type: none"> <li>1. My email service has been disrupted since May 25. If you required a reply and have not heard from me, please resend your message to <a href="mailto:bueter@transitofvenus.org">bueter@transitofvenus.org</a> or <a href="mailto:bueter@transitofvenus.org">bueter@transitofvenus.org</a>. If necessary, call.</li> <li>2. As June 8th draws near, preparations for the transit celebration in Mishawaka, IN, (see <a href="#">roadtrip.htm</a>) may prevent me from responding to all inquiries and requests. I appreciate your consideration in sending me your information. I'll do my best to address all parties.</li> <li>3. I recommend you soon print webpages that you deem important. I cannot guarantee that this website will support all traffic in June.</li> </ol> <p>Links added to "<a href="#">Observing</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.dfconcepts.com/maps/">http://www.dfconcepts.com/maps/</a><br/>Venus transit plots with cities and times from Daniel Falla overlaid with country boundary data provided by David Dunham.</li> <li>• <a href="http://home.plex.nl/~gottm/doa/">http://home.plex.nl/~gottm/doa/</a><br/>Free software to calculate the local circumstances of the June 8th Venus transit from any location that you specify; also includes an animated view of the transit at 1 hour, 1 min., or 1 second intervals; from Adri Gerritsen of the Dutch Occultation Association (DOA).</li> <li>• <a href="http://v4.livegate.net/sjkastronomy/home.html">http://v4.livegate.net/sjkastronomy/home.html</a><br/>"Pictures of the transit will be displayed every minute with a resolution of 640x480; broadcasting starts at 7.00 and ends at 13.30;" from Sander Klieverik.</li> <li>• <a href="http://home.freeuk.net/dgstrange/transit.venus.2004/">http://home.freeuk.net/dgstrange/transit.venus.2004/</a><br/>Webcam with "live images added on 2004 Jun 08, approximately every 15 minutes from 05:00 to 12:00 UTC;" from Worth Hill Observatory, Dorset, U.K.</li> </ul> <p>Link added to "<a href="#">Shop</a>" page:<br/><a href="http://www.spacewears.com">http://www.spacewears.com</a><br/>T-shirts with transit of Venus images. Buy a shirt and receive a free pair of "eclipse shades."</p> <p>Link added to "<a href="#">Roadtrip</a>" page:<br/><a href="http://www.publicbroadcasting.net/wvpe/news.newsmain?action=article&amp;ARTICLE_ID=643223">http://www.publicbroadcasting.net/wvpe/news.newsmain?action=article&amp;ARTICLE_ID=643223</a><br/>NPR radio interview describes local events occurring in the "Michiana" area.</p> <p>Link added to "<a href="#">Miscellaneous</a>" page:<br/><a href="http://www.norristownpreservationsociety.org/">http://www.norristownpreservationsociety.org/</a><br/>A lecture and a reenactment of David Rittenhouse observing the transit, from the Norristown Preservation Society and the Delaware Valley Amateur Astronomers (DVAA), sponsored by the American Philosophical Society.</p> |
| May 27 | <p>Added to "<a href="#">Road Trip</a>" page:<br/><a href="#">roadtrip.htm</a><br/>More details about the schedule of events in Mishawaka, Indiana, and pictures of the Main Observing Site. Features include planetarium programs; multiple viewing aids with solar filters; concessions, restrooms and parking; free gifts; webcast from overseas; broadcast of WWV time signal; etc.</p> <p>Added to "<a href="#">Matt Rumley</a>" page:<br/><a href="#">rumley.htm</a><br/>On Saturday, June 5, from 8:30-10:30 p.m. EST, Matt Rumley will perform at <b>The Pub</b> in Mishawaka, IN. Matt Rumley is the featured musician on <a href="#">Transit of Venus Program</a>. <b>The Pub</b>, which serves <a href="#">Transit of Venus Sunrise Ale</a>, is located on the northwest corner of Grape Rd. and Cleveland Rd. (S.R. 23), behind the MFB Bank.</p> <p>Link added to "<a href="#">Historic</a>" page:<br/><a href="#">rittenhouse-log.htm</a><br/>Log observatory David Rittenhouse built for the 1769 observations at his Norriton farm; image courtesy of Historical Society of Montgomery County.</p> <p>Links added to "<a href="#">Non-English</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.ca2000pt.com/noticias/venus04/venus04.htm">http://www.ca2000pt.com/noticias/venus04/venus04.htm</a><br/>Portuguese Astronomical Club CA2000 maintain online, since December 2003, a dedicated page to June 8, Venus transit. We are also linked to the ESO observation program; site submitted by Mário Ramos.</li> <li>• <a href="http://www.vt-2004.org">http://www.vt-2004.org</a><br/>The European Southern Observatory is leading an extensive program that is loaded with information, and its website is continuously growing. This is a thorough website in multiple languages for transit of Venus observers, educators, and enthusiasts.</li> </ul>   |
|        | <p>Links updated at "<a href="#">Music</a>" page and "<a href="#">Sousa</a>" page:<br/><a href="http://www.loc.gov/rr/perform/ih/as/">http://www.loc.gov/rr/perform/ih/as/</a><br/>The Library of Congress has compiled a thorough collection of music related to the transit of Venus, including John Philip Sousa's <i>Transit of Venus March</i>. You can see the entire history of Sousa's piece, hear a modern orchestrated version, and download a FREE band score. There are several other musical pieces by various artists detailed at this Library of Congress</p>  |

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| May 24 | <p>website.</p> <p>Link added to "<b>Observing</b>" page:<br/> <a href="http://people.cs.und.edu/~rmarsh/VENUS/venusindex.html">http://people.cs.und.edu/~rmarsh/VENUS/venusindex.html</a><br/> The University of North Dakota will provide a webcast of the Venus transit from India.</p> <p>Link added to "<b>Non-English</b>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://cosmos.astro.uson.mx/Ciencia/Planetaria/VT04/vt04.htm">http://cosmos.astro.uson.mx/Ciencia/Planetaria/VT04/vt04.htm</a><br/> Observe, record, and have live webcast from Cairo, Egypt (in Spanish); site submitted by Antonio Sanchez.</li> <li>• <a href="http://astrosurf.com/ceu/venus2004.html">http://astrosurf.com/ceu/venus2004.html</a><br/> "Dates of transits, contact times on Portuguese cities, the traject of Venus on the sun, safe rules about optic materials, and links to Portuguese webpages and international webpage;" (in Portugese); site submitted by Jorge Almeida.</li> <li>• <a href="http://www.venus-giessen.de/venus.htm">http://www.venus-giessen.de/venus.htm</a><br/> "Science weekend in Giessen, Germany;" site submitted by Harald Schätzlein.</li> </ul> <p>Link added to "<b>Education</b>" page:<br/> <a href="http://www.nojum.net/transit2004/topics.asp">http://www.nojum.net/transit2004/topics.asp</a><br/> Workshop in Iran on amateur astronomy and astronomy education, with emphasis on the transit of Venus.</p>  |
| May 17 | <p>Link added to "<b>Observing</b>" page:<br/> <a href="http://aa.usno.navy.mil/data/docs/Transit.html">http://aa.usno.navy.mil/data/docs/Transit.html</a><br/> Online calculator computes the local Venus transit circumstances for any location on the Earth; from U.S. Naval Observatory.</p> <p>Link added to "<b>Safety</b>" page:<br/> <a href="http://www.exploratorium.com/venus/index.html">http://www.exploratorium.com/venus/index.html</a><br/> You can track the transit of Venus live with no risk of eye damage from the sun by watching a <b>narrated webcast</b> from Greece; from the Exploratorium.</p>  |
| May 13 | <p>Link added to "<b>Observing</b>" page and "<b>Education</b>" page:<br/> <a href="http://www.exploratorium.com/venus/index.html">http://www.exploratorium.com/venus/index.html</a><br/> The Exploratorium will provide a narrated webcast with four telescopes in white light filters and hydrogen-alpha filters. Watch the transit live, even if it is not visible from your site. [This webpage replaces <a href="http://www.exploratorium.edu/webcasts/">http://www.exploratorium.edu/webcasts/.</a>]</p> <p>Links added to "<b>Shop</b>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.mishawakabrewingcompany.com/SpecialEvents.html">http://www.mishawakabrewingcompany.com/SpecialEvents.html</a><br/> The Mishawaka Brewing Company has crafted <i>Transit of Venus Sunrise Ale</i> to commemorate the transit of Venus. "Brewed using four malts and only one hop variety (Centennial) <i>Transit of Venus Sunrise Ale</i> is brewed in the style of an India Pale Ale. It contains only malted barley, hops, water and yeast. The tasty brew (6.1% alcohol) is available both on tap and individually bottled with 8 different labels that celebrate the event.</li> <li>• <a href="#">art.htm</a><br/> Professional and amateur artists alike convey their interpretations of the transit of Venus experience at the <b>Transit of Venus Art Exhibit</b>. The collection of new art is displayed now through June at the Glance Eyewear Gallery, 1639 N. Ironwood Dr., Suite 2, South Bend, Indiana.</li> </ul> <p>Link added to "<b>Miscellaneous</b>" page:<br/> <a href="http://www.mediatracks.com/orderMAIN.html">http://www.mediatracks.com/orderMAIN.html</a><br/> 05-09 broadcast of interviews of Sten Odenwald and Chuck Bueter addresses the transit of Venus; from Media Tracks Communication.</p> <p>Link added to "<b>Non-English</b>" page:<br/> <b>Voyage à Rodrigue</b>, l'ouvrage d'Alexandre-Gui Pingré qui parait dans la <b>Bibliothèque Universitaire &amp; Francophone</b>, Le Publieur (en collaboration avec SEDES). Édition établie par le professeur Jean-Michel Racault de l'université de La Réunion. 378 p., 25 \$, ISBN 2-84784-122-9;</p> |
| May 12 | <p>Added to "<b>Art</b>" page:<br/> Images of the <i>Transit of Venus Art Exhibit</i> at Glance Eyewear Gallery, which opened Monday, May 10.</p>   |
| May 10 | <p>Link added to "<b>Observing</b>" page and "<b>Education</b>" page:<br/> <a href="http://www.vt-2004.org">http://www.vt-2004.org</a><br/> The European Southern Observatory is leading an extensive program that is loaded with information, and its website is continuously growing. This is a thorough website for transit of Venus observers, educators, and enthusiasts. [Though ESO was an original link on this website, the Venus Transit 2004 consortium page has grown considerably and should be revisited for its new material in many disciplines.]</p> <p>Link added to "<b>Science and Math</b>" page:<br/> <a href="http://www.vt-2004.org/Background/InfoI2/EIS-B4.html">http://www.vt-2004.org/Background/InfoI2/EIS-B4.html</a><br/> Approximated method for the calculation of the parallax (with examples); from Venus Transit 2004 consortium.</p> <p>Change to "<b>Black Drop Effect</b>" page:<br/> Text of the answer regarding the Black Drop Effect and hydrogen-alpha filters is modified, courtesy of Jay Pasachoff.</p> <p>Link added to "<b>Education</b>" page:<br/> <a href="http://son.nasa.gov">http://son.nasa.gov</a><br/> The Student Observation Network tracks solar storms and predicts the impact of solar activity, such as aurorae.</p> <p>Link added to "<b>Historical</b>" page:"<br/> <a href="http://transits.mhs.ox.ac.uk/">http://transits.mhs.ox.ac.uk/</a><br/> "A browsable database of historical instruments and images from collections around the world; from the Scientific Instrument Commission (SIC) of the International Union of the History and Philosophy of Science. Institutions and individuals are invited to develop the site by contributing their own material."</p>   |

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| May 5    | <p>Link added to "<a href="#">Observing</a>" page and "<a href="#">Black Drop Effect</a>" page:<br/> <a href="http://home.hetnet.nl/%7Esmvanroode/venustransit/eng/eng_parallax.html#BD">http://home.hetnet.nl/%7Esmvanroode/venustransit/eng/eng_parallax.html#BD</a><br/>         At the critical moment when observers try to time when Venus touches the inside edge of the sun, strange phenomena such as the <a href="#">black drop effect</a> suddenly emerge. This site guides observers in discerning at what instant internal contact occurs; from Steven van Rode.</p> <p>Link added to "<a href="#">Education</a>" page and "<a href="#">Science and Math</a>" page:<br/> <a href="http://home.hetnet.nl/~smvanroode/venustransit/eng/eng_parallax.html">http://home.hetnet.nl/~smvanroode/venustransit/eng/eng_parallax.html</a><br/>         Measure the distance to the sun by knowing only your location (lat/long) and the time(s) of internal contact. That is, "compute the mean equatorial solar parallax online from your own and others' observations of the 2004 transit of Venus, employing <i>either</i> Halley's or Delisle's method." This is the easiest method for casual observers to quantify the distance to the sun from their own data.</p> <p>Added to "<a href="#">Black Drop Effect</a>" page:<br/>         Jay Pasachoff answers question about what an observer could expect of the black drop effect as seen through an H-alpha filter, particularly if there is a prominence on the limb of the sun near Venus at 2nd or 3rd contact.</p>  |
| May 4    | <p>Added to "<a href="#">Safety</a>" page:<br/>         Fine print in big, bold letters addresses the requisite safety warnings. Also added were precautions against using Schmidt-Cassegrain telescopes and large-aperture reflector telescopes to project a solar image, due to potential heat build-up.</p> <p>Link added to "<a href="#">Shop</a>" page:<br/> <a href="http://www.melbourneobservatory.com/bulletin.htm#sale">http://www.melbourneobservatory.com/bulletin.htm#sale</a><br/>         Reproduction of Gregorian telescope, 1742 atlas, Proctor map, etc.; from Brian Greig.</p> <p>Link added to "<a href="#">Science and Math</a>" page:<br/> <a href="http://planetarynames.wr.usgs.gov/venus/venuTOC.html">http://planetarynames.wr.usgs.gov/venus/venuTOC.html</a><br/>         The origins of the names of Venus features are listed by the U.S. Geological Survey; site noted by Joan Griffith.</p>  |
| May 2    | <p>Link added to "<a href="#">Peace</a>" page:<br/> <a href="#">flyer.htm</a><br/>         New page shows contents of flyer that accompanies <i>Eclipse Shades</i> sent to Iraq and Afghanistan. The text is translated into <a href="#">Arabic</a> and <a href="#">Farsi</a>, while maps and tables suggest the zones of visibility and global viewing times.</p> <p>Link added to "<a href="#">Miscellaneous</a>" page:<br/> <a href="http://image.gsfc.nasa.gov/poetry/venus/News/News.html">http://image.gsfc.nasa.gov/poetry/venus/News/News.html</a><br/>         "Anecdotes and surprising sub-stories" appearing in old newspaper accounts that have been extracted from the ProQuest Historical Newspaper Service; from the NASA IMAGE mission's education and public outreach program (POETRY). Site submitted by Peter Abrahams.</p>   |
| April 28 | <p>Changes to "<a href="#">Index</a>" page:<br/> <a href="#">index.htm</a><br/>         New look on home page includes a few highlighted boxes and more concise descriptions of key web pages.</p> <p>Links added to "<a href="#">Education</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://skyandtelescope.com">http://skyandtelescope.com</a><br/> <i>Sky &amp; Telescope</i> magazine features the transit of Venus in a series of articles in the February, April, and June 2004 issues.</li> <li>• <i>Science News</i> magazine (Vol. 165, No. 16, 17 April 2004) features the transit of Venus in an article.</li> <li>• <a href="http://www.iop.org/EJ/toc/0031-9120/39/3">http://www.iop.org/EJ/toc/0031-9120/39/3</a><br/> <i>Physics Education</i> (Volume 39, Number 3, May 2004) has several articles about the transit of Venus, including an illustrated teacher's guide by Robin Catchpole, senior astronomer at the Royal Observatory Greenwich, and a paper plate explanation of the frequency of transits. All papers published in the journal are made freely available for 30 days from the date of online publication.</li> <li>• <a href="http://www.sciam.com/issue.cfm">http://www.sciam.com/issue.cfm</a><br/> <i>Scientific American</i> magazine (May 2004) features the transit of Venus in an article by Steven J. Dick.</li> <li>• <a href="#">kids.htm</a><br/>         The transit of Venus is for kids, too! Enjoy these simple yet fun activities for younger audiences.</li> </ul> <p>Links added to "<a href="#">Projects</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.sunderstanding.net">www.sunderstanding.net</a><br/>         Measuring the Universe with a String and a Stone A series of activities allow students to measure the distance to the sun simply, with the lone assumption that Venus is the size of the Earth; from Vivek Monteiro.</li> <li>• <a href="http://vamana.space-india.org/">http://vamana.space-india.org/</a><br/>         Vamana Project is a 3-phase activity in which students in India measure the radius of the earth using a gnomon; determine the maximum angular separation between the Sun and Venus; and determine the path that Venus takes across the solar disc on June 8<sup>th</sup>.</li> </ul> <p>New "<a href="#">Celebrate</a>" page added:<br/> <a href="#">celebrate.htm</a><br/>         The former "Road Trip" page has been renamed, and material has been updated and added.</p> |
| April 19 | <p>We invite you to join us as we celebrate the transit of Venus with multiple events in South Bend, Indiana, and surrounding communities. See <a href="#">roadtrip.htm</a>. We are busy preparing for the transit; hence the updates have been fewer lately. Please continue to send your suggested links and we will soon upload them.</p>  |
|          | <p>Link added to "<a href="#">Education</a>" page:<br/> <a href="http://www.astronomy.no/venus080604/webcast.html">http://www.astronomy.no/venus080604/webcast.html</a><br/>         A live webcast from several sites in Norway will include images with H-alpha filters. The webcast will start before first contact, probably just before 05 UTC, and will last until about half an hour after last contact (around 12 am UTC).</p>  |

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| April 13 | <p>Link added to "<a href="#">Miscellaneous</a>" page:<br/> <a href="http://w1.217.telia.com/~u21702585/venus.htm">http://w1.217.telia.com/~u21702585/venus.htm</a><br/>         Watch Venus segue through her phases. A series of photographs features the planet as the transit of Venus nears.</p>   |
| April 12 | <p>New "<a href="#">Art Exhibit</a>" page created:<br/> <a href="#">art.htm</a><br/>         Artists are invited to commemorate the transit of Venus with their handiwork to be exhibited at Glance Eyewear Gallery in South Bend, Indiana, or online at a virtual gallery through this website.</p> <p>New "<a href="#">Projects</a>" page created:<br/> <a href="#">projects.htm</a><br/>         Global observing projects allow students to contribute data from their observing site through the Internet to international pools of data, from which the distance to the sign can be calculated.</p>   |
| April 6  | <p>Added to "<a href="#">Peace</a>" page:<br/>         An excerpt from William Sheehan and John Westfall's <a href="#">The Transits of Venus</a> addresses Iraq and the historical significance of Venus in Mesopotamia.</p> <p>Link added to "<a href="#">Education</a>" page:<br/> <a href="http://www.sil.si.edu/Exhibitions/chasing-venus/education.htm">http://www.sil.si.edu/Exhibitions/chasing-venus/education.htm</a><br/>         The National Museum of American History features a <i>Chasing Venus</i> lecture series. This website from the Smithsonian continues to grow.</p> <p>Link added to "<a href="#">Historical</a>" page:<br/> <a href="http://rathnasree.htmlplanet.com/Pathani.htm">http://rathnasree.htmlplanet.com/Pathani.htm</a><br/>         "Samanta Chandrasekhar - a Siddhantic Astronomer from a remote region in Orissa who had perhaps been unaware of theoretical predictions for this transit and observed it through predictions of his own; from N. Rathnasree, Nehru Planetarium, New Delhi.</p>   |
| March 30 | <p>Link added to "<a href="#">Education</a>" page:<br/> <a href="http://www.sunderstanding.net">www.sunderstanding.net</a><br/>         Measure the universe with a string and a stone. A series of activities allow students to measure the distance to the sun simply, with the lone assumption that Venus is the size of the Earth; from Vivek Monteiro.</p> <p>Links added to "<a href="#">Miscellaneous</a>" page:<br/> <a href="http://www.sciencefriday.com/pages/2004/Mar/hour1_030504.html">http://www.sciencefriday.com/pages/2004/Mar/hour1_030504.html</a><br/>         A "Science Friday" episode of <i>Talk of the Nation</i> on National Public Radio (NPR) features a discussion about the transit of Venus; with Bob Berman.</p> <p>Links added to "<a href="#">Shop</a>" page:<br/>         Effective April 1, 2004 and for limited time, T-shirts with transit of Venus images are available through e-bay.</p> <ul style="list-style-type: none"> <li>• <a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905980039">http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905980039</a><br/>Doppelmayer</li> <li>• <a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905980468">http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905980468</a><br/>Black and white Horrocks stained glass</li> <li>• <a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905981515">http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905981515</a><br/>Parallax angle of Venus</li> <li>• <a href="http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905784785&amp;category=15687&amp;sspageName=STRK%3AMESSE%3AIT&amp;rd=1">http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&amp;item=3905784785&amp;category=15687&amp;sspageName=STRK%3AMESSE%3AIT&amp;rd=1</a><br/>Nitzschke's transit at sea</li> </ul> <p>Link added to "<a href="#">Safety</a>" page:<br/> <a href="http://www.astronomyindia.uni.cc/">http://www.astronomyindia.uni.cc/</a><br/>         Sun View goggles are mylar solar filters.</p> |
| March 24 | <p>New "<a href="#">Peace</a>" page added:<br/> <a href="#">peace.htm</a><br/>         Share the common experience of an uncommon event. You can help the troops stationed overseas and the local people with whom they interact to see the transit of Venus by sending protective eyewear to the region. Rainbow Symphony, in coordination with the Coalition Forces Land Component Command, is sending <i>Eclipse Shades</i> to 20 sites in Iraq and Afghanistan. <b>For \$1.00 USD you can send a pair</b> of <i>Eclipse Shades</i> to the region that has the best viewing circumstances and weather prospects in the world.</p>  |
| March 18 | <p>Link added to "<a href="#">Observing</a>" page:<br/> <a href="http://www.occultations.astronews4you.com/">http://www.occultations.astronews4you.com/</a><br/>         "Freeware program developed by the Dutch Occultation Association enables you to make accurate local predictions for the transit. It also supports both real-time and step-by-step instructions." Submitted by Steven van Roode.</p> <p>Link added to "<a href="#">Education</a>" page:<br/> <a href="http://www.venus2004.org">http://www.venus2004.org</a><br/>         "To calculate the astronomical unit, two distant people are needed. These people can exchange their data coming from their observations. Register and contact other passionate people to work together." Submitted by Agnès Bugin.</p> <p>Link added to "<a href="#">Safety</a>" page:<br/> <a href="http://www.venus2004.org/sinformer/n/news3366.php?langue=2">http://www.venus2004.org/sinformer/n/news3366.php?langue=2</a><br/>         Safety precautions to observe the transit.</p>   |



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| March 14    | <p>Link added to "<b>Historical</b>" page:<br/> <a href="http://skyandtelescope.com/observing/objects/sun/article_1187_1.asp">http://skyandtelescope.com/observing/objects/sun/article_1187_1.asp</a><br/> All 147 glass negatives recently discovered in the vault of the Lick Observatory are digitally stitched together into a movie, which "shows Venus's silhouette flickering strangely as it marches across the Sun's face" in 1882. From Anthony Misch and William Sheehan. (Site suggested by Hilmar Duerbeck.)</p> <p>Link added to "<b>Historical</b>" and "<b>Black Drop</b>" pages:<br/> <a href="http://www.astro.univie.ac.at/~wuchterl/Kuffner/2004/Venustransit/russell_vt.html">http://www.astro.univie.ac.at/~wuchterl/Kuffner/2004/Venustransit/russell_vt.html</a><br/> Illustrations (plates) from the book <i>Observations of the Transit of Venus, 9th December 1874</i>, by Henry Chamberlain Russell; from the Institute for Astronomy at the University of Vienna.</p> <p>Activity added to "<b>Kids</b>" page:<br/> <a href="#">egg.jpg</a><br/> Make sunny-side-up eggs, with pepper simulating sunspots and a peppercorn being Venus.</p> <p>Link added to "<b>Non-English</b>" page:<br/> <a href="http://perso.wanadoo.fr/club.astronomie.jura/transit%20Venus.htm">http://perso.wanadoo.fr/club.astronomie.jura/transit%20Venus.htm</a><br/> French site suggested by Jean-Louis Trudel.</p> <p>Link added to "<b>Miscellaneous</b>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/TRANSIT_04/TRANSIT_2004.html">http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/TRANSIT_04/TRANSIT_2004.html</a><br/> Transit of Venus animations as seen from different perspectives, such as from the moon or from the TRACE spacecraft; from Glenn Schneider, Steward Observatory, University of Arizona.</li> <li>• <a href="http://skyandtelescope.com/news/article_1204_1.asp">http://skyandtelescope.com/news/article_1204_1.asp</a><br/> The spacecraft Opportunity captures images of the transit of the Martian moon Deimos across the face of the sun; from <i>Sky &amp; Telescope</i>.</li> <li>• <a href="http://www.lunarplanner.com/HCpages/Venus.html">http://www.lunarplanner.com/HCpages/Venus.html</a><br/> <i>Cycles of the Heart: The Venus Passage</i> by Nick Anthony Fiorenza. [Note: While I normally do not include or advocate websites that cite the "psychophysiology of Venus," I include this website for its graphics and animations. -- CB]</li> </ul> |
| March 5     | <p>Link added to "<b>Education</b>" and "<b>Shop</b>" pages:<br/> <a href="http://www.amazon.com/exec/obidos/tg/detail/-/1581780230/qid%3D1077148792/ref/104-4875580-8768764">http://www.amazon.com/exec/obidos/tg/detail/-/1581780230/qid%3D1077148792/ref/104-4875580-8768764</a><br/> Book: <i>Hokuloa: The British 1874 Transit of Venus Expedition to Hawai'i</i>, by Michael Chauvin; ISBN: 1581780230. Can also be ordered by phone (808-848-4135), fax (808-847-8260), or email ( <a href="mailto:press@bishopmuseum.org">press@bishopmuseum.org</a>).</p>   |
| March 2     | <p>Added to "<b>PHM What's Up</b>" page:<br/> <a href="http://phm/whatsup.htm">phm/whatsup.htm</a><br/> John Philip Sousa's <i>Transit of Venus March</i> will be performed April 21 at the Penn Spring Band Concert, beginning at 7:30 p.m. EST in the PHM Center for Performing Arts (in Mishawaka, IN).</p>   |
| March 1     | <p>Added to "<b>Road Trip</b>" page:<br/> <a href="http://roadtrip.htm">roadtrip.htm</a><br/> Illustrations show the eastern horizon from sunrise through the fourth contact of the transit of Venus, as seen from South Bend, Indiana.</p> <p>Corrections to "<b>Travel</b>" page:<br/> Fixed a few broken hot links from thumbnail images and discontinued two dead sites. Thank you, Howard Cohen, for the corrections.</p>   |
| February 26 | <p>New "<b>Kids Stuff</b>" page:<br/> <a href="http://kids.htm">kids.htm</a><br/> The transit of Venus is for kids, too! Enjoy these simple yet fun activities for younger audiences.</p> <p>New "<b>Things Round</b>" page:<br/> <a href="http://round.htm">round.htm</a><br/> Round images related to the the transit of Venus are abundant. Consider these images for the stained glass window activity shown on the <b>Kids Stuff</b> page.</p> <p>New "<b>Non-English</b>" page:<br/> <a href="http://non-english.htm">non-english.htm</a><br/> Many non-English websites address the transit of Venus. These links, suggested by international transit of Venus enthusiasts, are only a sampling of the material out there. Please send your suggestions.<br/> <i>Note:</i> The following links that were already within this website have been re-located to <a href="http://non-english.htm">non-english.htm</a>. Therefore, your bookmarks to them may need to be updated.</p> <ul style="list-style-type: none"> <li>• <a href="http://perso.wanadoo.fr/pgj/transit%20080604.htm">http://perso.wanadoo.fr/pgj/transit%20080604.htm</a></li> <li>• <a href="http://home.hetnet.nl/~smvanroode/venustransit/parallax2.html">http://home.hetnet.nl/~smvanroode/venustransit/parallax2.html</a></li> <li>• <a href="http://home.hetnet.nl/~smvanroode/venustransit/waarnemen3.html">http://home.hetnet.nl/~smvanroode/venustransit/waarnemen3.html</a></li> <li>• <a href="http://www.venusovergang.be">www.venusovergang.be</a> and <a href="http://www.venusovergang2004.be">www.venusovergang2004.be</a></li> <li>• <a href="http://www.sonnenborgh.nl/">http://www.sonnenborgh.nl/</a></li> </ul> <p>Link added to "<b>Non-English</b>" page:<br/> <a href="http://www.venustransit.at/">http://www.venustransit.at/</a><br/> "The official Austrian node for the transit event with history, tips, science, and links. It is recommended and supported by the Austrian Society for Astronomy and Astrophysics <a href="http://www.oegaa.at">www.oegaa.at</a>." Submitted by A. Univ. Prof. Dr. Franz Kerschbaum.</p> <p>Link added to "<b>For Teachers</b>" page:<br/> <a href="http://phm/teachers.htm">phm/teachers.htm</a><br/> Two workshops for teachers and active observers will be on March 27 and April 24, 2004, in Mishawaka, IN. Reservations required; space is limited.</p>   |

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|             | <p>Link added to "<b>Education</b>" page:<br/> <a href="http://www.astronomy.no/venus080604.html">http://www.astronomy.no/venus080604.html</a><br/> Teacher activities address the circumference of earth, parallax, distance to the sun, and Kepler's Laws. Site also lists historic background, visibility times, current research, and more. The organizers in Norway seek other observers for global project.</p> <p>Link added to "<b>Spacecraft</b>" page:<br/> <a href="http://vestige.lmsal.com/TRACE/POD/images/Mercury2003_combo.gif">http://vestige.lmsal.com/TRACE/POD/images/Mercury2003_combo.gif</a><br/> TRACE spacecraft captures image of Mercury transiting sun in 2003. For more transit of Mercury images and movies see <a href="http://www.williams.edu/astronomy/eclipse/transits/index.html#mercury">http://www.williams.edu/astronomy/eclipse/transits/index.html#mercury</a>.</p>   |
| February 25 | <p>Link added to "<b>Observing</b>" page:<br/> <a href="http://sunearth.gsfc.nasa.gov/eclipse/transit/TV2004.html">http://sunearth.gsfc.nasa.gov/eclipse/transit/TV2004.html</a><br/> Pertinent data, such as sunrise times, contact times, and maps of the visibility zone; from Fred Espenak.</p> <p>Link added to "<b>Historical</b>" page:<br/> <a href="http://www.vt-2004.org/Background/Infol2/EIS-F7.html">http://www.vt-2004.org/Background/Infol2/EIS-F7.html</a><br/> <i>The 1882 Transit of Venus as Seen from Chile</i>; from Hilmar W. Duerbeck.</p> <p>Link added to "<b>Travel</b>" page:<br/> <a href="http://www.flycapers.com/tours/voyages/2004/2004Transit">http://www.flycapers.com/tours/voyages/2004/2004Transit</a><br/> Travel to Crete to view the 2004 transit of Venus.</p> <p>Added to "<b>Black Drop</b>" page:<br/> <a href="http://www.vt-2004.org/Background/Infol2/EIS-F7.html">http://www.vt-2004.org/Background/Infol2/EIS-F7.html</a><br/> Belgian astronomers view "black drop" effect from Chile in 1874; from Hilmar W. Duerbeck.</p> |
| February 24 | <p>Link added to "<b>US Naval Observatory</b>" page:<br/> <a href="http://justfun.org/astrohtml/heliostat.htm">http://justfun.org/astrohtml/heliostat.htm</a><br/> An original heliostat from the USNO expeditions; in a private collection.</p>   |
| February 22 | <p>Links added to "<b>Historical</b>" page:<br/> <a href="http://cho.uconn.edu/cgi-bin/scandoc.cgi?app=22&amp;folder=2680&amp;doc=1">http://cho.uconn.edu/cgi-bin/scandoc.cgi?app=22&amp;folder=2680&amp;doc=1</a><br/> <a href="http://cho.uconn.edu/cgi-bin/scandoc.cgi?app=22&amp;folder=2679&amp;doc=1">http://cho.uconn.edu/cgi-bin/scandoc.cgi?app=22&amp;folder=2679&amp;doc=1</a><br/> Illustrations of the 1882 German expedition to Hartford, Connecticut.</p>   |
| February 21 | <p>Link added to "<b>Education</b>" page:<br/> <a href="http://svs-f.gsfc.nasa.gov/~wfeimer/SEC/Gen_SEC/IP/Transit.mpg">http://svs-f.gsfc.nasa.gov/~wfeimer/SEC/Gen_SEC/IP/Transit.mpg</a><br/> <i>Venus Transit Animation</i>, from the NASA Goddard Space Flight Center Scientific Visualization Studio.</p> <p>Correction added to "<b>Historical</b>" page:<br/> <a href="http://home.europa.com/~telscope/ToV.1874.spectr.obs.doc">http://home.europa.com/~telscope/ToV.1874.spectr.obs.doc</a><br/> Reports of spectroscopic observations suggest the <i>sun</i> was seen in monochromatic light before the 1874 transit.</p>  |
| February 20 | <p>Link added to "<b>Education</b>" page:<br/> <a href="http://connect.larc.nasa.gov/">http://connect.larc.nasa.gov/</a><br/> On March 18, 2004, NASA Connect will broadcast a program with activities about scaling the solar system, the Astronomical Unit (A.U.), and the transit of Venus.</p> <p>Link added to "<b>Historical</b>" page:<br/> <a href="http://home.europa.com/~telscope/ToV.1874.spectr.obs.doc">http://home.europa.com/~telscope/ToV.1874.spectr.obs.doc</a><br/> <i>Spectroscopic observations of the 1874 transit of Venus in monochromatic light</i>, from Peter Abrahams, considers reports that Venus was seen in monochromatic light before the 1874 transit, while two observers recorded Venus against the chromosphere during the 1874 transit. [See Feb. 21 entry.]</p>  |
| February 19 | <p>Link added to "<b>Education</b>" page:<br/> <a href="http://planetquest.jpl.nasa.gov/venus_transit.html">http://planetquest.jpl.nasa.gov/venus_transit.html</a><br/> Broadcast schedule for the March 19 webcast <i>Venus Transit and the Search for New Worlds</i>, from JPL.</p>  |
| February 18 | <p>Link added to "<b>Education</b>" page:<br/> <a href="http://www.amazon.com/exec/obidos/tg/detail/-/1581780230/qid%3D1077148792/ref/104-4875580-8768764">http://www.amazon.com/exec/obidos/tg/detail/-/1581780230/qid%3D1077148792/ref/104-4875580-8768764</a><br/> Book: <i>Hokuloo: The British 1874 Transit of Venus Expedition to Hawai'i</i>, by Michael Chauvin; ISBN: 1581780230.</p>   |
| February 17 | <p>Link added to "<b>Observing</b>" page:<br/> <a href="http://skyandtelescope.com/aboutsky/pressreleases/article_1178_1.asp">http://skyandtelescope.com/aboutsky/pressreleases/article_1178_1.asp</a><br/> Witness the celestial dance of the planets leading up to the 2004 transit of Venus. On <b>February 23, 2004</b>, Venus sizzles next to the crescent moon; from <i>Sky &amp; Telescope</i>.</p>   |
| February 13 | <p>Link added to "<b>Education</b>" page:<br/> <a href="http://vamana.space-india.org/">http://vamana.space-india.org/</a><br/> Vamana Project is a 3-phase activity in which students in India measure the radius of the earth using a gnomon; determine the maximum angular separation between the Sun and Venus; and determine the path that Venus takes across the solar disc on June 8, 2004.</p>   |
| February 10 | <p>Link added to "<b>Historical</b>" page:<br/> <a href="http://rathnasree.htmlplanet.com/Nursinga%20Rao's%20Observations.htm">http://rathnasree.htmlplanet.com/Nursinga%20Rao's%20Observations.htm</a><br/> 1874 Transit Observations of A.V. Narsinga Rao, at Visakhapatnam, India; from N. Rathnasree and Sanat Kumar, Nehru Planetarium, New Delhi.</p>  |
| February 9  | <p>Added to "<b>Richard Proctor</b>" page:<br/> Eight images from Proctor's <i>The Sun: Ruler, Fire, Light, and Life of the Planetary System</i>, 1871.</p>  |
|             | <p>New "<b>Shop</b>" page added:<br/> Lists items for sale related to the transit of Venus, including a DVD and CDs; clothing; souvenirs; music; travel and tours; books and publications; and solar observing equipment.</p>  |

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| February 6 | <p>New "<a href="#">Transit of Venus, June 5-6, 2012</a>" page added:<br/>Begins preparations for the second and final transit of the twenty first century.</p> <p>Added to "<a href="#">Quotes</a>" page:<br/>Richard Proctor seeks approval of 21st century astronomers for the anxiety and zeal of 19th century colleagues.</p>  |
| February 5 | <p>Added to "<a href="#">PHM Planetarium &amp; Air/Space Museum</a>" home page:<br/>Transit of Venus workshops for educators and participants of global observing projects will be held March 27 and April 24, 2004, from 9:00 a.m. until noon. Details will follow. (This notice also appears on the "<a href="#">For Teachers</a>" page.)</p> <p>Added to "<a href="#">PHM Planetarium &amp; Air/Space Museum-Shuttle Crews</a>" page:<br/>"The walls of the PHM Planetarium &amp; Air/Space Museum are adorned with the official crew portraits from every space shuttle mission. These oak-framed photographs are signed by every astronaut to have flown on a shuttle."</p> <p>Correction on "<a href="#">Safety</a>" page:<br/>Link and thumbnail to the <a href="#">Venuscope</a> now should take you to the multi-language home page at <a href="http://www.venus2004.net/">http://www.venus2004.net/</a>.<br/>SODAP-SOBOMEX- Department Sky &amp; Space added transit schedules for Canada and USA.</p>  |
| February 4 | <p>Links added to "<a href="#">Historical</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.ras.org.uk/html/library/vtransit.html">http://www.ras.org.uk/html/library/vtransit.html</a><br/>Royal Astronomical Society Library features images from 19th century transits.</li> <li>• <a href="#">harpers-whole.jpg</a><br/>Cover of <i>Harper's Weekly</i> depicts children watching the transit by staring at the sun and by viewing the sun through smoked glass--both very dangerous practices.</li> </ul> <p>Links added to or corrected on the "<a href="#">Travel</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.embah.com/desert_safaris_the_transit_of_venus_in_sinai.htm">http://www.embah.com/desert_safaris_the_transit_of_venus_in_sinai.htm</a><br/>Travel to Sinai to view the 2004 transit of Venus.</li> <li>• <a href="http://www.eclipsetours.com/transit1.html">http://www.eclipsetours.com/transit1.html</a><br/>Travel to the island of Mauritius to view the 2004 transit of Venus.</li> </ul> <p>Correction on "<a href="#">Site Map</a>" page:<br/>Link from <a href="#">Travel &amp; Tours</a> now takes you to <a href="#">travel.htm</a>.</p>  |
| February 3 | <p>Links added to "<a href="#">Miscellaneous</a>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://sunearth.gsfc.nasa.gov/sunearthday/2004/vt_bookmark_ban_wall.htm">http://sunearth.gsfc.nasa.gov/sunearthday/2004/vt_bookmark_ban_wall.htm</a><br/>Download posters, wallpaper, and bookmarks; from NASA.</li> <li>• <a href="http://www.transit-of-venus.org.uk/downloads.htm">http://www.transit-of-venus.org.uk/downloads.htm</a><br/>Download poster and wallpaper; from University of Central Lancashire.</li> </ul> <p>Link added to "<a href="#">Science &amp; Math</a>" page:<br/><a href="http://www.transit-of-venus.org.uk/science.htm">http://www.transit-of-venus.org.uk/science.htm</a><br/>Using parallax to measure distance; from University of Central Lancashire.</p> <p>Correction added to "<a href="#">jars-scopes.doc</a>":<br/>Assertion that 2004 transit is first transit visible in chromosphere (excluding the halo) fails to acknowledge the spectroscopic views of Venus in the chromosphere during 19<sup>th</sup> century transits, such as by George Tupman in 1874. See <i>The Transits of Venus</i> by William Sheehan and John Westfall, Prometheus Books.</p> <p>Correction added to "<a href="#">Historical</a>" page:<br/>Image to which the "<a href="#">doppel.jpg</a>" thumbnail links is now larger image.</p> |
| January 23 | <p>Link added to "<a href="#">Education</a>" page:<br/>New "<a href="#">Simulate</a>" page suggests simple activities to simulate a transit of Venus, such as using a small ball, a wire, and a picture on your computer monitor.</p>   |
| January 22 | <p>Link added to "<a href="#">Spacecraft</a>" page:<br/><a href="http://sohowww.nascom.nasa.gov/hotshots/">http://sohowww.nascom.nasa.gov/hotshots/</a><br/>While <a href="#">Stardust</a> tastes the ice, <a href="#">Spirit</a> roves, and <a href="#">Cassini</a> approaches a slice of Saturn rings, SOHO takes the pulse of the sun. See what the SOHO team is thinking and how they respond to satellite challenges. 04-01-22</p> <p>Correction to "<a href="#">Education</a>" page:<br/><a href="http://www.spaceweather.com">http://www.spaceweather.com</a><br/>URL updated for SpaceWeather.com.. Current solar weather with "science news and information about the Sun-Earth environment."</p> <p>Correction to "<a href="#">Miscellaneous</a>" page:<br/><a href="#">statue_print.jpg</a><br/>Corrected link now takes you to the print entitled <i>Transit of Venus</i> of museum workmen moving a statue of Venus.</p>   |
| January 21 | <p>Correction to "<a href="#">Education</a>" page:<br/><a href="http://www.sil.si.edu/Exhibitions/upcoming.htm">http://www.sil.si.edu/Exhibitions/upcoming.htm</a><br/>Planned exhibit at Smithsonian Institution Libraries entitled <i>Chasing Venus: Observing the Transits of Venus, 1631-2004</i> will be on the corrected dates of March 24, 2004-April 3, 2005.</p>   |
|            | <p>Link added to "<a href="#">Issues</a>" page:<br/><a href="#">jars-scopes.doc</a><br/><i>The Transit of Venus After Baby Food Jars and Gun Scopes</i>, an admonition for astronomy educators in general and planetarians in particular to embrace and advocate the 2004 transit of Venus as a global education opportunity; from Chuck Bueter.</p>  |

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| January 19 | <p>Links added to "<b>Black Drop</b>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://rathnasree.htmlplanet.com/blackdrop_effect.htm">http://rathnasree.htmlplanet.com/blackdrop_effect.htm</a><br/>Ongoing discussion about the black drop effect; from Nehru Planetarium, New Delhi.</li> <li>• <a href="http://analyzer.depaul.edu/paperplate/Transit%20of%20Venus/Internet%20caveat.htm">http://analyzer.depaul.edu/paperplate/Transit%20of%20Venus/Internet%20caveat.htm</a><br/>Caveat about believing everything you see on the Internet (<i>including here</i>).</li> <li>• <a href="http://bde-honolulu.gif">bde-honolulu.gif</a><br/>Illustration of internal contact, 1874 December 8, Honolulu; Tupman 6-inch refractor.</li> <li>• <a href="http://bde-artificial.gif">bde-artificial.gif</a><br/>"Front elevation of the Model artificially representing the circumstances of the Transit of Venus when place a the distance of 400 feet..."</li> </ul>  |
| January 18 | <p>Link added to "<b>Historic</b>" page:<br/><a href="http://www.mariner.org/age/cook.html">http://www.mariner.org/age/cook.html</a><br/><i>Venus Fort, Erected by the Endeavour's People to secure themselves during the Observation of the Transit of Venus, at Otaheite.</i></p> <p>Links added to "<b>Education</b>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://photojournal.jpl.nasa.gov/catalog/PIA03151">http://photojournal.jpl.nasa.gov/catalog/PIA03151</a><br/><i>Venus Hemispherical Globes</i>; several mosaics in a projection portray the entire surface of Venus that folds into a 12-inch globe; from the U.S. Geological Survey.</li> <li>• <a href="http://solar-center.stanford.edu/activities.html">http://solar-center.stanford.edu/activities.html</a><br/>Stanford Solar Center offers "exciting activities, images, interactive tools, text, and other resources to let you research our special star -- the Sun."</li> <li>• <a href="http://www.amazon.com/exec/obidos/tg/stores/detail/-/books/0802713513/104-4875580-8768764">http://www.amazon.com/exec/obidos/tg/stores/detail/-/books/0802713513/104-4875580-8768764</a><br/>Book: <i>Measuring the Universe: Our Historic Quest to Chart the Horizons of Space and Time</i>; by Kitty Ferguson</li> <li>• <a href="http://www.phys.uu.nl/~vgent/venus/venustransitbib.htm">http://www.phys.uu.nl/~vgent/venus/venustransitbib.htm</a><br/>Extensive bibliography of original sources relating to transits of Venus, with links to many of the original publications; from R.H. van Gent. (Link also exists on "<b>Historic</b>" page.)</li> </ul> <p>Link added to "<b>Spacecraft</b>" page:<br/><a href="http://exoplanets.org/">http://exoplanets.org/</a><br/>California &amp; Carnegie Planet Search keeps you current on exo-planet research and almanacs.</p> <p>Links added to "<b>Misc</b>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://members.shaw.ca/theatretart/tofv.html">http://members.shaw.ca/theatretart/tofv.html</a><br/>Theatre scenes from 2003 presentation of Maureen Hunter's play in Vancouver.</li> <li>• <a href="http://www.sonnenborgh.nl/">http://www.sonnenborgh.nl/</a><br/>Exhibit at Museum Sterrenwacht Sonnenborgh features photos and instruments from the 19th century transit expeditions from the Netherlands.</li> </ul> <p>Link added to "<b>Travel</b>" page:<br/><a href="http://www.mttam.net/venus.html">http://www.mttam.net/venus.html</a><br/>Raffle for trip to view the 2004 transit of Venus; May 22 drawing.</p> <p>Link added to "<b>Safety</b>" page:<br/><a href="http://www.solarscope.org/solarscopeenglish.htm">http://www.solarscope.org/solarscopeenglish.htm</a><br/>A Solarscope is commercially available from Light Tec Optical Instruments.</p> |
| January 17 | <p>Additions and changes to three related files:</p> <ul style="list-style-type: none"> <li>• <a href="http://nd1800s.htm">nd1800s.htm</a><br/>Switched content of <i>Notre Dame and the 19th Century Transits of Venus</i> to this new file name. Article (initially uploaded December 21, 2003) details the efforts to witness the 1882 transit of Venus using the Napoleon III telescope; from Robert Havlik.</li> <li>• <a href="http://napoleon3.htm">napoleon3.htm</a><br/>Replaced former content with this article that details <i>University of Notre Dame and the Napoleon III Telescope</i>; from Robert Havlik.</li> <li>• <a href="http://nd.htm">nd.htm</a><br/>Altered descriptions to reflect two items above.</li> </ul>   |
| January 16 | <p>Link added to "<b>Music</b>" page:<br/><a href="http://analyzer.depaul.edu/paperplate/transit.htm">http://analyzer.depaul.edu/paperplate/transit.htm</a><br/>The soundtrack to the <i>Transit of Venus program</i> is available for educators; you can also view links to the audio CD <a href="#">contents</a> and an <a href="#">order form</a>.</p> <p>Link corrected on "<b>Spacecraft</b>" page:<br/><a href="http://www.space.com/searchforlife/seti_doyle_worlds_010809.html">http://www.space.com/searchforlife/seti_doyle_worlds_010809.html</a><br/>SETI document describes detecting other worlds using the photometric transit or 'wink' method; by Dr. Laurance Doyle.</p> <p>Links added to "<b>Misc.</b>" page:</p> <ul style="list-style-type: none"> <li>• <a href="http://statue_print.jpg">statue_print.jpg</a><br/>Auction item: photogravure plate entitled "The Transit of Venus," circa 1888; artist unknown; printed by the Typographic Etching Company.</li> <li>• <b>Novel</b>: <i>Transit of Venus: Travels in the Pacific</i>; by Julian Evans.</li> </ul> <p>Link added to "<b>Historic</b>" page:<br/><a href="http://www.th.physik.uni-frankfurt.de/~jr/gif/stamps/s_hell.jpg">http://www.th.physik.uni-frankfurt.de/~jr/gif/stamps/s_hell.jpg</a><br/>A good image of a stamp of Maximilian Hell, S. J.</p>  |

A good image of a stamp of Maximilian Hell, S.J.

Links added to "[Education](#)" page:

- Labels for the DVD, data CD, and audio CD for the [Transit of Venus program](#) are added.
- [http://www.imcce.fr/vt2004/en/fiches\\_eng.html](http://www.imcce.fr/vt2004/en/fiches_eng.html)  
ESO education sheets for teachers.
- [http://www.imcce.fr/vt2004/en/cdrom\\_eng.html](http://www.imcce.fr/vt2004/en/cdrom_eng.html)  
CD-ROM of historical documents forthcoming from ESO.
- <http://www.amazon.com/exec/obidos/tg/detail/-/1863683941/104-4875580-8768764>  
Book: *Venus in Transit: Australia's Women Travellers 1788-1930* by Douglas R. Sellick.
- **Book:**  
*The Transits of Venus*; by William Sheehan and John Edward Westfall

Link added to "[Safety](#)" page:

[http://www.jotabout.com/portuesi/astro/solar\\_filter.html](http://www.jotabout.com/portuesi/astro/solar_filter.html)

Build a solar filter for your telescope; from Michael Portuesi.

January 11

Links added to "[Safety](#)" page:

- <http://www.rainbowsymphony.com/soleclipse.html>  
Solar shades are commercially available through [Rainbow Symphony](#).
- <http://www.venuscope.com/>  
The [Venuscope](#) is commercially available from Sodap Sobomex.
- <http://www.transitofvenus.org/tvscreen.htm>  
*Must-See TV (Transit Venus) Screen* is a rear-projection device made at 2003 GLPA Conference workshop.

January 10

Links added to "[Historical](#)" page:

- [ferguson.htm](#)  
James Ferguson authored *Astronomy Explained Upon Sir Isaac Newton's Principles and Made Easy to Those Who Have Not Studied Mathematics*. Posted are excerpted images.
- [victoria.jpg](#)  
Sketch from the May 8, 1875, issue of *The Graphic*: "The Recent Transit of Venus--Preparing for Work at an Australian Bush Station."

Addition to [napoleon3.htm](#):

Images and background of the Napoleon III telescope at University of Notre Dame.

January 6

Addition to [napoleon3.htm](#):

End Notes for *University of Notre Dame and the 1874 and 1882 Transits of Venus*, by Robert Havlik. Included are newspaper accounts describing the 19th century transit of Venus, their significance, and the public and professional reaction to them.

January 5

Link copied to "[Historical](#)" and "[Travel](#)" pages:

[hoole.htm](#)

Destinations in England related to the transit of Venus, with emphasis on Jeremiah Horrocks' church and Horrocks memorials.

January 4

Link added to "[Historical](#)" page:

<http://www.hoolechurch.org.uk/main.htm>

The *Hoole C.E. Church* website features Jeremiah Horrocks, St. Michael Church, and the events commemorating and celebrating the transit. Includes image of new stained glass window for Horrocks' church.

January 3

Link added to "[Science and Math](#)" page:

<http://www.glenn.freehomepage.com/writings/Pentacle/>

"Pi, Phi, and the Pentacle" features the five-point pattern derived from the aligning orbits of Venus and earth; from Glenn R. Smith.

January 2

Happy Transit of Venus Year.

Link added to "[Education](#)" page:

<http://skyandtelescope.com>

*Sky & Telescope* magazine features the transit of Venus in a series of articles, beginning with the February 2004 issue.

Links added to the "[Travel](#)" page:

- <http://www.spearstravel.com/venus.htm>  
Travel to Greece to view the 2004 transit of Venus with [Fred Espenak](#).
- [http://www.mythictravels.com/Tours/Venus\\_Transit/greeceitinerary.html](http://www.mythictravels.com/Tours/Venus_Transit/greeceitinerary.html)  
Travel to Greece to view the 2004 transit of Venus.
- <http://www.syz.com/rasc/venus.htm>  
Travel to Egypt to view the 2004 transit of Venus with the Royal Astronomical Society of Canada, Calgary Centre.

