

What's New?

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Year 2013

Sept 3	<p>Added file: http://transitofvenus.org/docs/Medellin-v58-4.pdf</p> <p>The 2012 Transit of Venus Observed at Real de Santa Ana, Baja California Sur, Mexico: A Tribute to the XVIII Century Mexican Astronomer Joaquín Velázquez de León; contributed by Xavier López Medellín, et al.</p>
April 5	<p>Build_a_Sun_Funnel_v2.0.pdf</p> <p>Updated instructions for Build a Sun Funnel to include tips on using a reflector telescope whose aperture needs to be "stopped down" to lessen the incoming intensity of the sun.</p> <p>stamp-China.png Chinese stamp series includes ToV</p> <p>medallion.jpg Chinese medallion celebrates ToV</p>

- Article Index**
[What's New?](#)
[Year 2011](#)
[Year 2010](#)
[Year 2009](#)
[Year 2007](#)
[Year 2006](#)
[Year 2005](#)
[Year 2004](#)
[Year 2003](#)
[All Pages](#)

Year 2012

Dec 12	<p>Added to 2012 page: http://mnras.oxfordjournals.org/content/early/2012/12/10/mnrasl.sls027.full.pdf?keytype=ref&ijkey=0VPPUJI6ZcCKg5G</p> <p>Italian astronomers measured the Rossiter-McLaughlin effect during the 2012 transit of Venus, when the sun's spectral lines are distorted slightly. The experiment is a precursor to having a 40 meter scope with spectrograph studying the orbital properties of Earth-like exoplanets; Monthly Notices of the Royal Astronomical Society, December 11, 2012. Courtesy of Paolo Molaro.</p>
Nov 24	<p>Added new 2012 page: history/2004/367-2012</p> <p>Recap of June 5-6, 2012, transit of Venus, with sample images, videos, recaps of the 2012 experience.</p>
Oct 31	<p>Added to 2004/2012: history/2004/365-a-community-celebrates</p> <p><i>A Community Celebrates the Transit of Venus</i> is a paper summarizing the extensive outreach and preparations in Michiana, near the Michigan-Indiana border. The text summarizes an image-laden prezi at http://prezi.com/3tgyibho9g-w/transit-of-venus-across-the-sun/</p>
Oct	<p>misc/363-vision-for-future</p> <p>Visions for Future. I write political leaders to solicit their written vision on the role of observational astronomy in our nation's well-being and their vision of the future in 100+ years.</p>
Sept 26	<p>misc/362-video-follows-michiana-experience</p> <p>Video Follows Michiana Experience. A videography team visits Indiana and Michigan to capture the transit of Venus. Here's the initial video from Trey Burns.</p>
Aug 12	<p>misc/360-transit-of-venus-time-keg</p> <p>Transit of Venus Time Keg. A former stainless steel beer keg is converted to a time capsule to capture the essence of the celestial event for future observers in the 22nd century.</p>
June 18	<p>history/2004/361-viewing-great-timing-difficult</p>

June 10	Viewing Great; Timing Difficult. A recap of Chuck Bueter's day in the sun on June 5, 2012.
June 5	2012 Transit of Venus!
June 4	misc/359-time-to-set-sail Time to set sail as we are on the cusp of the transit of Venus. See you on the other side.
May 31	Added to June 2012: <ul style="list-style-type: none"> • june2012/where-to-be/302-what-if-its-cloudy What if it's cloudy? If you are thwarted by disappointing weather or local circumstances (like night), here are some options and anecdotes to calm your agitated soul.
May 16	Added to Misc.: misc/358-you-can-learn-a-lot-from-a-dot You Can Learn a Lot From a Dot, NASA astronomer Dr. Steven Williams shares his insight on the ToV at public lecture and at MAS Star Party.
May 15	Added to Links: Video & New Media : <ul style="list-style-type: none"> • http://vimeo.com/channels/ourlasttransitofvenus <i>our last Transit of Venus</i>, multiple videos from Outreach Europlanet • http://www.youtube.com/user/UTSIC/videos Videos from all talks at Transit of Venus 2012 Symposium at University of Toronto, 28 April 2012. • http://www.youtube.com/playlist?list=PL420FA63E0D3D1393&feature=plcp NASA Sun-Earth Day collection of transit of Venus videos.
May 13	Added to Eye Safety : http://youtu.be/4RGr9FcBrSM Talk by Dr. Ralph Chou at 2012 Symposium at University of Toronto gives definitive advise (and reasoning) about multiple ways to view the sun safely. Added to FAQs : faq/354-can-i-use-welding-glass-to-view-the-sun FAQ describes the limited ways a #14 shade welding glass can be used, though the trend is to dismiss the technique in favor of established and practical materials. Added to Travel & Tours : http://www.transitofvenus.org/component/content/article/81-events/341-tour Take an exclusive tour of transit of Venus highlights in Indiana, with lectures, art exhibits, historical artifacts on display, webcasts, telescopic sungazing, and a post-transit celebration with Venusian ale at a Michigan microbrewery.
May 10	Added to Latest News : <ul style="list-style-type: none"> • component/content/article/81-events/351-artifacts-at-harris-branch-library Artifacts and information now on display at Harris Branch Library in Granger, IN • misc/348-pizza-transit Pizza Transit offers specialty pizzas to celebrate the 2012 transit of Venus Added to Links: Video & New Media : http://discoveredsun.tumblr.com/post/22633500403/ieee-spectrum-magazines-podcast-interview-with Podcast interview with Mark Anderson, author of <i>The Day the World Discovered the Sun</i> , explains the the value of the transit of Venus expeditions for navigational gain. Added to The Arts : education/the-arts/353-transit-of-venus-in-pastel Transit of Venus in Pastel Exhibit Opens; at Harris Branch Library in Granger, Indiana Added to TROVE : http://www.transitofvenus.org/component/content/article/81-events/352-time-keg Time Keg Seeks Your Imprint; article solicits your ideas for the text that can be on a transit of Venus time capsule made from a beer keg.
May 2	Added to Sun Funnel Instructions : Da-Lite screen can be purchased from http://www.bigscreencenter.com/Venus-Transit-Sun-Funnel-s/4476.htm .
April 27	Updated URL at Links: Teacher Resources : http://isaac.exploratorium.edu/~pauld/Venus/TransitOfVenus.pdf Make a scale model of the Venus Transit; from the Exploratorium.
April 25	Added to Calendar: http://transitofvenus-yerkesworkshop.eventbrite.com/ Two programs for educators on May 2, 2012, at Yerkes Observatory, Williams Bay, WI
April 23	Added to Latest News : <ul style="list-style-type: none"> • http://www.transitofvenus.org/misc/343-arise-ye-artists-for-ale-and-astronomy <i>Arise, Ye Artists, for Ale and Astronomy</i>, an appeal for artists to craft a design to accompany Venusian ale, which celebrates the 2012 transit of Venus • adventure <i>TROVE Adventure</i>, a family-oriented treasure hunt in northern Indiana and southwestern Michigan (Michiana) to seek clues and knowledge about the transit of Venus.
	Added to Latest News :

April 19	<p>Added to Latest News: http://www.transitofvenus.org/misc/346-astrofest AstroFest in South Bend on April 28; family-oriented event features Transit of Venus activities and Hubble Space Telescope exhibit; held at Union Station in South Bend, IN, from 2:00 to 4:00 p.m.</p>
April 18	<p>Added to 2004 Transit of Venus Images: http://www.space.com/14714-venus-transit-2004-skywatcher-photos.html Venus Transit of 2004: 51 Photos of Rare Celestial Sight; a collection of images on Space.com</p> <p>Added to Links: Science & Math: https://venustex.oca.eu/foswiki Venus Twilight Experiment writes: "During ingress and egress a bright and thin luminous arc (the "aureole") is observable, appearing around the circumference of Venus' disk which is partially outside the solar limb...Farther away from the Sun, the aureole - due to light refraction - disappears and Venus shines from the light diffused by droplets dispersed above its thick cloud deck. The Venus Twilight Experiment is establishing an international collaboration for deploying specialized instruments in the transit visibility area to get multi-wavelength data...Our final aims are a better characterization of these twilight phenomena and - in turn - an improved understanding of the atmosphere of Venus, jointly with the observations obtained by Venus Express, the probe now orbiting the planet."</p>
April 15	<p>Added to Links: Teacher Resources:</p> <ul style="list-style-type: none"> • http://lcogt.net/education/activity/measure-diameter-sun#overlay-context= Measure the Diameter of the Sun, from Las Cumbres Observatory Global Telescope Network • http://www.exo.net/~pauld/Venus/eclipseTransit2012.htm <i>Eclipses, transits, and extra solar planets</i>, a workshop by Linda Shore, Paul Doherty and Eric Muller <ul style="list-style-type: none"> ◦ http://www.exo.net/~pauld/activities/astrometry/transitvenus/transitofvenus.htm Finding the Astronomical Unit; a math root from Paul Doherty ◦ http://www.exo.net/~pauld/Venus/TransitOfVenus.pdf Transit of Venus: A Scale Model, from Linda Shore of Exploratorium
April 9	<p>Added to Links: Video & New Media:</p> <ul style="list-style-type: none"> • https://twitter.com/#%21/tov2012 @tov2012 is the Twitter account maintained by Steven van Roode • http://prezi.com/9r9blzqx_tep/transit-of-venus-image-blast/ <i>Transit of Venus Image Blast</i> is a compilation of many images that are almost all my own copyright or public domain, such as NASA content. Requires a while to download fully. Images may be used freely for educational purposes. • http://sunearthday.nasa.gov/2012/multimedia/transit1.php Transit of Venus videos from NASA Sun-Earth Day • http://video.wpbt2.org/video/2215560518 <i>Venus in Transit</i>, 5-minute version from StarGazers for April 9-15, 2012; from PBS station WPBT <p>Added to Calendar:</p> <ul style="list-style-type: none"> • April 16 at noon, speaker at Mishawaka Rotary Club at Riverview Terrace, 426 Lincolnway East, Mishawaka • April 25 at 7:30 PM, speaker at Gunderson Auditorium, Achatz Hall of Science, University of Saint Francis, Ft Wayne. <p>Added to Links: Where to Be:</p> <p>http://eclipse-maps.com/Eclipse-Maps/ToV_maps.html Global maps with text in dozens of other languages depict where the 2012 transit of Venus is visible, courtesy of Michael Zeiler.</p> <p>Added to Links: Teacher Resources:</p> <ul style="list-style-type: none"> • http://universe.utoronto.ca/wp-content/uploads/2012/02/12feb17_tdsb_eureka_transit_worksheet_v1.pdf Using Transits to Find Exoplanets, a teacher's guide for an activity for Grade 9 science; from the Dunlap Institute for Astronomy & Astrophysics, University of Toronto. • http://universe.utoronto.ca/wp-content/uploads/2012/02/How-Far-is-the-Sun-Worksheet.pdf How Far is the Sun?, "a mathematically intensive worksheet suitable for use in Grade 11 or 12 physics classes," from the Dunlap Institute for Astronomy & Astrophysics, University of Toronto.
March	<p>Added to Transit Writings:</p> <ul style="list-style-type: none"> • docs/Planetarian-March2012.pdf <i>Going All Out For Venus</i> Article in the March 2012 issue of Planetarian, Journal of the International Planetarium Society, summarizes transit of Venus history, outlines related education outreach, and includes sidebars by other authors about Kepler mission and Sun-Earth Day events; written by Chuck Bueter. Reprinted with permission of the International Planetarium Society (IPS). • http://classroomastronomer.toteachthestars.net/ <i>After the Transit-of-Venus Party is Over</i> in the Spring 2012 issue of The Classroom Astronomer, proposes "history, science skills and other things using historical transits extend the transit to exoplanetary discoveries, and prepare for the more challenging but commoner, next Transit of...Mercury in 2016!" Math and science activities are relevant to the 2012 Transit of Venus, too. • http://transitofvenus.nl/wp/2012/03/14/quotes-from-past-to-present/ <i>Quotes from the Past</i>, a collection of sentiments from past transits of Venus <p>Updated Build a Sun Funnel for Group Viewing With a Telescope:</p>

March 18	<p>http://cdn.transitofvenus.org/docs/Build_a_Sun_Funnel.pdf Rick Fienberg added some instructions to answer common Qs and comments from users.</p>
March 13	<p>Added to Links: Teacher Resources: http://www.knowitall.org/nasa/pdf/connect/Venus_Transit.pdf <i>Venus Transit, Educator Guide with Activities in Mathematics, Science, and Technology</i>; from NASA Connect.</p> <p>Added to Store: Purchase bulk quantities of solar shades through Astronomers Without Borders (AWB), which has been a strong supporter of 2012 Transit of Venus education outreach. Proceeds from sales of solar shades with AWB branding will benefit the non-profit organization, with the following volume pricing available: 1 - 25 for \$0.95 each 25 - 99 for \$0.85 each 100 - 250 for \$0.75 each 251 - 499 for \$0.60 each 500 - 999 for \$0.50 each 1000+ for \$0.45 each</p>
March 8	<p>Added to Links: Teacher Resources: docs/Planetarian-March2012.pdf <i>Going All Out For Venus</i>, an article in the March 2012 issue of Planetarian, Journal of the International Planetarium Society, summarizes transit of Venus history, outlines related education outreach, and includes sidebars about Kepler mission and Sun-Earth Day events; written by Chuck Bueter. Reprinted with permission of the International Planetarium Society (IPS).</p> <p>Added to Sousa on March 8: http://youtu.be/YeY8Lx6LEnk <i>Preparing for "Transit of Venus March" by John Philip Sousa.</i> Penn Symphonic Winds rehearse the seldom-heard march for their performance on March 8, 2012, at the Penn High School Center for Performing Arts (CPA) in Mishawaka, IN.</p> <p>Added to Links:Music: http://www.jwpepper.com/6385611.item JW Pepper sells the band set and score for Sousa's <i>Transit of Venus March</i>.</p>
March 7	<p>Updated Phone App: Transit of Venus Phone App now available for free download:</p> <ul style="list-style-type: none"> • iTunes version • Android version <p>Added to Store: http://www.amazon.com/Day-World-Discovered-Sun-Extraordinary/dp/0306820382 Book: <i>The Day the World Discovered the Sun</i>, by Mark Anderson</p>
February 28	<p>Added to Store: http://www.andreawulf.com/andrea-wulf/about-chasing-venus-how-science-turned-global-in-the-eighteenth-century-to-be-published-in-the-uk-us.html Book: <i>Chasing Venus</i>, by Andrea Wulf.</p>
February 26	<p>Added link to Footer: https://www.vorakyalgroup.com/ We recommend Vorakyal Group for web hosting services.</p> <p>Added to Links: Teacher Resources:</p> <ul style="list-style-type: none"> • http://transitofvenus.nl/wp/2012/02/16/pattern-on-a-paper-plate/ Hands-on activity that illustrates and explains the irregular frequency of transits of Venus using simple paper plates. Now available as PDF file with illustrations, improved from original posting at http://analyzer.depaul.edu/paperplate/Transit%20of%20Venus/transit_frequency.htm. • http://universe.utoronto.ca/wp-content/uploads/2012/02/12feb17_tdsb_eureka_transit_worksheet_v1.pdf Using Transits to Find Exoplanets, from University of Toronto, gives diagrams and examples from which students derive answers and plot graphs about exoplanets. <p>Added to Links: Video & New Media:</p> <ul style="list-style-type: none"> • docs/VenusTransit_2012158.wmv A higher-res version of NASA SDO animation showing the Solar Dynamics Observatory aligned to witness the 2012 transit of Venus; available for free download from VenusTransit_2012158.wmv • http://natwaddell.posterous.com/tag/transitofvenus Transit of Venus blog by Nat Waddell
February 19	<p>Added to History: 1874/1882: history/1874-1882/299-sermon-suggested-by-the-transit-of-venus A Baptist pastor reflects on the 1882 transit of Venus that has occurred earlier in the day and correlates the celestial phenomenon with God's grace.</p>
February 17	<p>Added to Latest News: misc/334-black-drop-coffee Black Drop Coffee commemorates the transit of Venus while paying tribute to the disruptive "black drop" effect that plagued the observations of earlier astronomers. Order it online.</p>
	<p>Added to The Arts:</p>

February 16	<p>education/the-arts/333-phm-art-contest</p> <p>The Penn Kingsmen Art Gallery invites student artists within the PHM School Corporation boundaries to submit artwork for the PHM Transit of Venus Art Contest to be exhibited in May 2012.</p> <p>Added to Transit Writings:</p> <ul style="list-style-type: none"> ● Pattern on a Paper Plate Convey why transits of Venus have the odd pattern of frequency, occurring in pairs that are separated by over a century, by using a simple paper plate. ● Full Dome Shows Underway Planetariums and full-dome digital theaters have transit of Venus and exoplanet shows now and in the queue. ● Art for the Guild David Henckel to use his Preston Guild commission to explore and share the artist's perspective on the transit of Venus from Hoole, England, hometown of Jeremiah Horrocks ● Set Sail on HMB Endeavour Replica ship holds lottery for voyage to witness transit of Venus. ● Invitation to a Treasure: TROVE Join the celebration in northern Indiana and southwestern Michigan with art exhibits, historical displays, activities, music, lectures, webcasts--even Black Drop Coffee and Venusian ale. <p>Added to Links: 2004: http://arvindparanjpye.blogspot.in/2012/02/sketching-transit-of-venus-8th-june.html Sketchings of the 2004 transit of Venus reveal visual highlights as Venus crosses solar limb; by Arvind Paranjpye.</p>
February 12	<p>Added to Links: Teacher Resources: http://www.transitofvenus.com.au Australian transit of Venus resources from the perspective of surveyors Down Under.</p>
February 9	<p>Added to Travel & Tours: http://www.isset.org/astronomy_meets_adventure/transit_of_venus.php The International Space School Educational Trust (ISSET) is offering a programme to the Gobi Desert, Mongolia, to view the transit accompanied by an astronaut, astronomer and astronaut trainer. Per Julie Woodcock, "Key features of the programme are astronomy, adventure, leadership, team building & professional development."</p>
January 30	<p>Added to Links: Video & New Media: http://solarsystem.nasa.gov/yss/display.cfm?Year=2012&Month=6&Tab=Classrooms NASA Year of the Solar System Educational Resources offer data, downloadable products, images, video, podcasts, animations, interactives, and networks.</p> <p>Updated and added to Links: Teacher Resources:</p> <ul style="list-style-type: none"> ● education/teacher-resources/331-the-sky-for-homeschoolers-a-beyond Jay Ryan illustrates Celestial Almanack, a celestial guide for observing the sky with emphasis on the Christian homeschoolers audience but valuable for all casual observers. Online guide continues his quality illustrations and descriptions leading up to the 2012 transit of Venus. ● http://sunearthday.nasa.gov/2012/articles/ttt_75.php Mathematical Problems Featuring Transit Applications, by Dr. Sten Odenwald. Transit Math book from NASA opens with dozens of math problems and answers related to eclipses, transits, and occultations, with an emphasis on transits of Venus through the centuries. ● http://solarsystem.nasa.gov/yss/display.cfm?Year=2012&Month=6&Tab=Classrooms NASA Year of the Solar System for the classroom links to multiple activities by grade level with descriptions. <p>Added to Links: Where to Be: http://eclipse-maps.com/Eclipse-Maps/Transits_files/ToV2012map_1.jpg Global map by Michael Zeiler depicts the zones of visibility for the 2012 transit of Venus.</p> <p>Added to Store:</p> <ul style="list-style-type: none"> ● http://astrogear.org/page/4/ Astro Gear features Venus Transit Authority t-shirt. ● https://www.lulu.com/commerce/index.php?fBuyContent=11758287 Transit of Venus: Classroom Activities from Steven van Roode; paperback, 36 pages. Also available for free download from http://transitofvenus.nl/wp/2011/11/08/classroom-activities/. <p>Added to Links: The Arts: http://www.amazon.com/Truth-Study-Center-Minoru-Shimizu/dp/3822846406 <i>Truth Study Center</i> by Wolfgang Tillmans; the photographer's collection of works "shows us another side of the world we live in today,...from evocative nude studies...to astronomical views of planet Venus passing over the disc of the sun...(in) pursuit of impossible truth."</p>
January 26	<p>Added to Links: The Arts: http://www.poetrylibrary.edu.au/poets/hope-a-d/the-transit-of-venus-0144007 The Transit of Venus, poem by A.D. Hope; from the Australian Poetry Library.</p>
January 24	<p>Added to TROVE: education/the-arts/328-art-show The TROVE Art Exhibit puts out a call to artists to share their talent and enthusiasm for the transit of Venus. The exhibit will run May 6 through June at The Livery in Benton Harbor, MI.</p>
	<p>Added to TROVE:</p>

January 23	<p>80-trove/329-2012eclipse Solar Eclipse Sunset: Lake Michigan on May 20. Observe the May 20 annular solar eclipse as a prelude to the June 5 transit of Venus. For people looking west over Lake Michigan, the sun appears as a crescent at sunset because of the intervening moon.</p> <p>Added to The Arts: education/the-arts/328-transit-of-venus-art-show <i>Transit of Venus Art Show</i> calls all artists for two-dimensional artwork for display from May through June at The Livery in Benton Harbor, MI.</p> <p>Added to Books: <i>The Astronomer of Rousdon</i> by Barbara Slate; a published biography of Charles Grover, an amateur astronomer who was astronomical assistant to Sir Cuthbert Peek on the Royal Geographical Society's expedition to observe the 1882 transit of Venus at Jimbour on the Darling Downs in Queensland, Australia.</p>
January 21	<p>Added to Video & New Media: http://vimeo.com/channels/ourlasttransitofvenus <i>Our Last Transit of Venus</i> is a documentary highlighting three groups: "scientists who will observe the Transit to study Venus and exoplanets, amateurs and students who will redo the experiment of determining the size of the Solar System and profession and/or amateur historians with the intention to observe the Transit with 18th and 19th century instruments."</p> <p>Added to Links: Teacher Resources:</p> <ul style="list-style-type: none"> • http://astrosociety.org/education/publications/tnl/78/78.html The Fall 2011 issue of the Astronomical Society of the Pacific (ASP) newsletter, The Universe in the Classroom, features the transit of Venus in <i>Don't Miss the Transit of Venus in 2012: It's Your Last Chance Until 2117</i>. The article, authored by Chuck Bueter, recounts historical expeditions and technological gains through the centuries while looking forward to Kepler Mission findings using the transit method. The article is complemented with links to hands-on activities and online resources. • http://www.astrosociety.org/tov/tov.pdf <i>The 2012 Transit of Venus</i> by Paul Deans is an 8-page reprint from Mercury magazine, Summer 2011. • http://planetquest.jpl.nasa.gov/ PlanetQuest Exoplanet Exploration is an engaging site for news and multimedia about NASA's search for new worlds. Keep pace with current tally of new and candidate planets; get your questions answered by Astronomer Steve; create your planet with Extreme Makeover; check out the great videos from multiple NASA missions, and always see the latest exoplanet news at the forefront of science. <p>Added to Travel & Tours: http://www.astro-trails.com/index.php/destination/?d=annular-eclipse-2012 Astro Trails will visit the leeward side of the island of Hawaii.</p>
January 15	<p>Added to Video & New Media: http://youtu.be/ehHY9fTrb7Q The Transit of Venus, a 4-minute video on the celestial event, its historical significance, and the value of the transit method in finding new planets. Soon to be available as full-dome video for digital theaters.</p> <p>Added to PHM 2012: PHM_DVT_Newsletter_12-01-13.pdf Video debuts at PHM Theater; Venus Shines in PM Sky; Conflict with Sports in the 17th Century; Treasure TROVE</p>
January 11	<p>Added to Links: Exoplanet Transits: http://planetquest.jpl.nasa.gov/ PlanetQuest Exoplanet Exploration is an engaging site for news and multimedia about NASA's search for new worlds. Keep pace with current tally of new and candidate planets; get your questions answered by Astronomer Steve; create your planet with Extreme Makeover; check out the great videos from multiple NASA missions, and always see the latest exoplanet news at the forefront of science.</p> <p>Added to Latest News: http://www.transitofvenus.org/misc/326-sousa-on-march-8 The Penn Symphonic Winds will perform the <i>Transit of Venus March</i> by John Phillip Sousa on March 8, 2012, at the Penn Fine Arts Festival Concert in Mishawaka, IN.</p> <p>Added to Transit Writings:</p> <ul style="list-style-type: none"> • Hubble Practices Moon Shot The Hubble Space Telescope dedicates several orbits to practicing for the June 5 transit of Venus as HST instruments target the lunar crater Hipparchus-C. • Transit History From Four Angles Four perspectives on the history of the transit of Venus launch dialogue at the 219th AAS meeting in Austin, TX. • Raising a Glass to 2012 As we enter the New Year, join with sailors of previous expeditions in raising a toast.

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[Back to Top](#)