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Vision For Future

In late September 2012 I wrote some elected officials and candidates for office, including President Barack Obama and Governor Mitt Romney, seeking their personal contribution to the [Transit of Venus Time Keg](#). I asked them for their vision of the future, where they expect America to be in a century, and the roles science and the observation of nature (e.g., the transit of Venus) serve in our national interests.

Awaiting their responses, I invite all candidates of political office--people who aspire to lead--to submit their long-range vision, as outlined below:

Dear Candidate for Leadership,

I write to invite you to support education outreach in science, technology, engineering, and mathematics (STEM) by sharing your vision of the future.



According to NASA figures, the nation's space agency experienced "the largest NASA event ever" during the June 5 transit of Venus (Source: NASA GSFC, June 2012). For the last time in our lives, the planet Venus was readily visible during the day as it passed directly in front of the sun.

While both political parties profess to support STEM education, no political candidates led the nation in 2012 by personally witnessing the celestial spectacle that captivated the rest of the world. Similar lackluster leadership occurred with the 2004 transit of Venus, which Google deemed the #1 Popular Event in the world for an entire month (Google Zeitgeist, June 2004). Is it any wonder some people think today's politicians are out of touch with constituents? I ask if you will challenge such prevailing cynicism and look ahead not just four years but, rather, 104 years, literally.

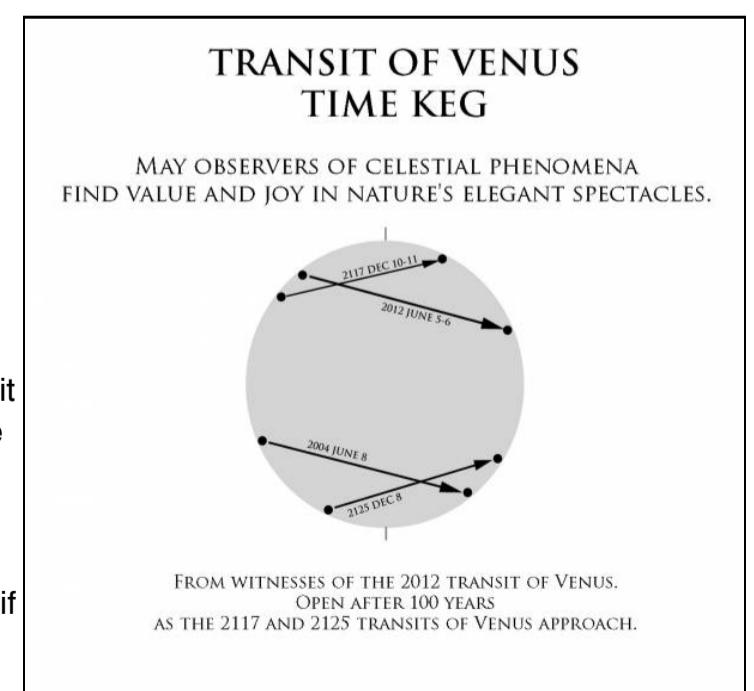
The Transit of Venus Time Keg (www.transitofvenus.org/misc/360-transit-of-venus-time-keg) is a time capsule to be opened by and to motivate future generations as they prepare for the December 2117 transit of Venus. Will you please write a letter of your vision of America for the people of that era? In your view, where are we now, and where do you expect us to be in a century when the next pair of Venus transits occur? What role does science and the observation of nature (e.g., the transit of Venus) serve?

Much of the national and global outreach for the transit of Venus originated in the Midwest, where we celebrated with an educational focus (e.g., <http://transitofvenus.org/trove>). Hence, the Time Keg will be sealed at the Great Lakes Planetarium Association (GLPA) Annual Conference, October 23-26, 2012, in Pittsburgh, PA.

Please write your personal statement preferably with permanent marker (e.g., Ultra Thin Point Sharpie®) on acid-free paper and mail it to the address below by October 19, 2012. If necessary to make the deadline, you may email a digital version, though longevity of printer ink is less assured. Include instructions as to whether I may publicly air your letter in 2012 or whether you want it to remain sealed and unread until the time capsule is opened. Your call. I prefer the latter if it means your written contribution to the Transit of Venus Time Keg would have more candor and less political correctness. That is, I'd rather have the people of 2117 judge the content of your letter than the people of 2012, the latter of whom might read it through the skewed filter of election year bias.

Thank you for your timely consideration,

Chuck Bueter
Granger, IN



Video Follows Michiana Experience

A new [video](#) by Trey Burns follows the 2012 transit of Venus experience from Michiana, the region around the Michigan-Indiana border. Local transit of Venus advocates hosted numerous [TROVE events that prepared the community](#) for the June 5, 2012, alignment of Earth, Venus, and the sun.



Burns writes, "In June of 2012, we traveled to South Bend, Indiana to document community organized events surrounding the Transit of Venus. Along the way we interviewed educators, amateur astronomers, bystanders, and an astrophysicist, who shared the meaning and significance of the Transit in 2012."

Transit of Venus Time Keg



The Transit of Venus Time Keg is a modest snapshot of the 21st century transit of Venus experience. The time capsule contents originally consisted of letters written by observers of the 2012 transit of Venus as the planet clearly passed in front of the sun on June 5. The Time Keg was [set up at a school site](#) in Mishawaka, IN, and later at The Livery microbrewery in Benton Harbor, MI. While the intention had been to close the Time Keg that day, I postponed closure so I could solicit additional and more varied artifacts. The Transit of Venus Time Keg will instead be closed and sealed on October 27, 2012, at the Great Lakes Planetarium Association (GLPA) [2012 Annual Conference](#) in Pittsburgh, PA.

If you wish to submit larger contents in advance, please [contact Chuck Bueter](#) to confirm space is available. Consider the need to preserve all contents over 100 years when offering your artifacts for inclusion. For example, letters should be written on acid-free paper with permanent black marker. Have some fun with it and offer your personal perspective on the transit of Venus. What would excite you if you were to open a message from across time?



The keg itself is a stainless steel vessel donated by [The Livery](#) microbrewery in Benton Harbor, Michigan. In pulling the keg from storage, right, brewer Steve Berthel [describes it](#) as an "early-60's Hoff-Stevens keg, the old-school kind."



Harry Miller of [The Apprentice Academy](#) in South Bend, Indiana, modified the bottom so the Time Keg could accept contents that fit within a 6-inch diameter opening. Once the keg is filled with artifacts, a metal plate Miller made will be caulked and bolted over the large opening. Additionally, an aluminum plug fits into the side bung hole that would have been filled by a wooden plug in the keg's beer days. Miller also fashioned a small metal bar that bolts over the new plug to keep it in place over time.

An attached plaque will cite the year the keg is sealed and instructions to open it after 100 years. The Transit of Venus Time Keg will initially be stored and exhibited at the Penn-Harris-Madison (PHM) Digital Video Theater, which also houses an [Air & Space Museum](#). Under the direction of Art Klinger, the PHM facility has been active in transit of Venus education and public outreach in northern Indiana for both the [2004](#) and [2012](#) celestial events.



An excerpt from the live Slooh broadcast during the transit of Venus shows the Transit of Venus Time Keg with some commentary by contributor Kate Rueff. Watch from 1:14:33 to about 1:22:00 at <http://youtu.be/zcQgkqK2cEo>.

Time to Set Sail

When reflecting on his transit of Venus experience in 1639, Jeremiah Horrocks wrote that he wanted to tell more people



imminent celestial event but was hindered by two things. First, he wished he had had more time. Don't we all--a little more time to tell a few more people who might appreciate knowing about this rare Sun-Venus-Earth alignment. It was as if Horrocks sensed having privileged information about the workings of the firmament that he wanted to share.

Second, Horrocks lamented that he had to compete with sports. In *Venus in Sole Visa* he wrote, "I hope to be excused for not informing other of my friends of the expected phenomenon, but most of them care little for trifles of this kind, preferring rather their hawks and their hounds." As I have said in [my stump speech](#) in the past few months, we are still competing with those hawks and hounds. I sympathize with Horrocks and share his sentiment.

If we as a nation want to prosper through math and science, then we need to celebrate math and science in action. The 2012 transit of Venus is a celebration of our ability to understand our place in the cosmos. We say we want to have a nation of critical thinkers capable of making informed decisions. So let's take that first step of science and observe. Witness nothing less than the solar system in motion, and extrapolate the passing of a planet in front of our star to the distant points of light in our night sky.

As we on earth get ready to watch the 2012 transit of Venus, [astronaut Don Pettit has been preparing](#) to capture the experience from his perch on the International Space Station (ISS). With great zeal, Pettit has undertaken a personal mission to photograph the transit on his own time, apart from the official ISS timeline. Pettit's story is just one of the many that I wish I had time to convey, but I've run out of earthly rotations to do it full justice.

Even if I were given the time, I'd only find more items to overload my calendar. Consider a small sampling of recent others waiting to be told... Irvin Stanley was an assistant photographer to the Kerguelen Island and Patagonia expeditions of the US Naval Observatory who twice committed to the rigors and travails of shipboard travel, a huge tradition itself in the transit of Venus narrative. I wanted to write more about Stanley. I wish I'd had more time to promote the program celebrating the [transit of Venus in Timor-Leste](#). I just saw this [fabulous plate](#) from observations in Guadalajara, Mexico, courtesy of Durruty Jesús de Alba Martínez. I would like to learn about the [1769 Transit of Venus Observatory in Lewes, Delaware](#). I wish I could have delivered a sample of beer to the Transit of Venus Real Ale Competition coordinated by [David Henckel](#). These are just a handful of the stories told by and about people inspired by the transit of Venus.

We're on the cusp of the [last transit of Venus in the 21st century](#), a celestial happenstance that could be that singular event in a young person's life that inspires them to look deeper into some natural wonder. I hope our efforts have produced fertile ground to nurture such notions. I'd like to wax poetic about the transit of Venus and its implications for us who are fortunate enough to experience it, but time and the planets march on.

If you are in northern Indiana, I invite you to join the [TROVE celebration](#) with me. I'll be at Bittersweet School in Mishawaka, IN, through first and second contacts before heading to Warren Dunes State Park in Sawyer, Michigan. There I want to watch the sun set over Lake Michigan, reminiscent of the iconic Nitzsche image with sailing ships on the horizon, shown above. Afterward, we head to The Livery microbrewery in Benton Harbor, MI, to close out this subtle yet sublime spectacle. You can follow our celebration there at 11:00 p.m. EDT on the live [Slooh broadcast](#). Just before midnight, the ISS soars nearly overhead.

It's time for this ship to set sail. Thanks to all who have been so supportive, a tome unto itself. See you on the other side.

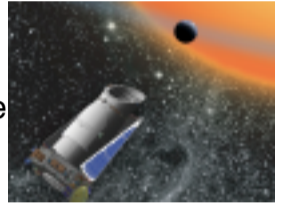
You Can Learn a Lot From a Dot

PRESS RELEASE: 16 May 2012

Who: Dr. Steven H. Williams of NASA Science Mission Directorate, on assignment from Smithsonian National Air and Space Museum
What: *You Can Learn a Lot From a Dot*, a talk on the upcoming transit of Venus and other discoveries from celestial alignments
When: Thursday, May 17, at 7:00 p.m. EDT
Where: Penn-Harris-Madison (PHM) Digital Video Theater ([map](#)), Mishawaka, IN

NASA Astronomer Celebrates Celestial Alignments

Dr. Steven Williams, a NASA education and public outreach leader, will feature the transit of Venus as he shares his insight on celestial alignments in his presentation *You Can Learn a Lot From a Dot*, on Thursday, May 17, at 7:00 p.m. at the PHM Digital Video Theater ([map](#)). During this last transit of Venus in our lifetimes, Venus will be visible only through [protective eyewear](#) as the planet crosses the face of the sun the evening of [Tuesday, June 5, 2012](#).



On assignment to NASA from the Smithsonian National Air and Space Museum, Williams will describe how the transit of Venus is like a front row seat to celestial alignments that astronomers seek far away. The transit method is a technique by which astronomers using the [NASA Kepler](#) spacecraft are finding new planets around distant stars.

The presentation opens a three-day stint for Williams as 2012 Transit of Venus ([TROVE](#)) celebrations get underway in the region near the Michigan-Indiana border, dubbed Michiana. Admission is \$3.00 for adults; \$2.00 for seniors.

In recent centuries when [transits have occurred](#), nations sent astronomers across the globe in a quest to measure the size of the solar system by timing the duration of the celestial event. Those international experiments will be re-created in 2012 with a simple [Transit of Venus phone app](#) that gathers the recorded times and GPS locations of modern observers.



Among the [events in Michiana](#), people can watch the solar spectacle safely from several organized [sites](#) with solar-filtered telescopes. Last week, [three transit-related art exhibits](#) and a display of historic [artifacts and information](#) opened in Mishawaka, Granger, and Benton Harbor. The [TROVE Adventure](#) is a treasure hunt involving dozens of local businesses and institutions that provides free solar-viewing shades to families who successfully visit and get a Keyword clue from ten of the Michiana sites. The solar shades are each equivalent to 70 pairs of sunglasses, per [Jay Pasachoff](#), an expert on transit of Venus astronomy.



On Friday, May 18, Williams will travel to Notre Dame and local schools to speak with students about NASA and space exploration. Friday evening he will be at the [Michiana Star Party](#) getting underway in conjunction with the Cass County's [Celebrate the Earth & Stars in the Park](#) in Vandalia, MI. At the [Dr. Lawless Park's Earth Day Celebration](#) on Saturday, Williams completes his tour with the opening talk at 1:00 p.m. EDT.

A partial solar eclipse seen at the [Sunday sunset over Lake Michigan](#) is an exclamation point on the weekend. Just as the sun settles toward the horizon, the unseen circular new moon sneaks above the horizon and begins to impinge on the lower portion of the solar disk. It's the beginning of an annular eclipse that is visible in its entirety in some southwestern states. The [Kalamazoo Astronomical Society](#) will set up solar filtered [telescopes at Warren Dunes State Park](#) in this precursor to the June 5 transit of Venus.



The next transit of Venus visible in the Midwest will occur in December 2125. The most recent Sun-Venus-Earth alignment was in 2004, a global sensation which Google deemed the world's #1 Popular Event that month ([Zeitgeist, June 2004](#)).

Michiana astronomy enthusiasts have established [TROVE](#) as a Midwest hub of 2012 Transit of Venus programs and are bracing for increased interest during the [June 5 celestial apparition](#). A [tour by exclusive motor coach](#) eases the task for enthusiasts to visit many transit of Venus highlights on June 5.

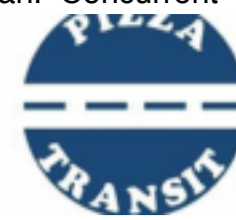
More TROVE events and viewing sites are listed at www.transitofvenus.org/trove.

[Read more: You Can Learn a Lot From a Dot](#)

Pizza Transit



What's in a name? For Sarah Brittin, a transit is a serendipitous alignment of Earth, Venus, the sun, dough, cheese, and toppings. The **Pizza Transit** restaurant, established by Sarah's father in 1987 and now under her ownership, recently relocated to 215 E. Main St. in Niles, Michigan. Concurrent with the restaurant's new environment are two new items on the menu: Transit of Venus Pizza and Black Drop Effect Pizza.



The Transit of Venus Pizza takes on the characteristics of the celestial bodies seen during the transit, highlighted by spicy chorizo sausage, jalapeno peppers, and cheddar cheese. The Black Drop Effect Pizza is a veggie simulation of the event itself, with spinach punctuated by black olives. The interim orange logo, adapted by Lisa Taylor of Taylor Design, plays on the original branding for Pizza Transit, shown in blue.

Thanks to Pizza Transit for sharing their enthusiasm for the 2012 transit of Venus and for hosting a gathering of the **TROVE** planning team, right. Pizza Transit is also the site for a **TROVE Adventure** treasure hunt clue. If you visit Pizza Transit to get your Keyword, be sure to pick up a pizza while you're there. You won't be disappointed.



TROVE Adventure

Join the Hunt for Treasure!

Collect 10 keywords and earn solar shades for your whole family!

[Note: though the opportunity to get free solar shades ended May 31, artifacts remain on display until after the June 5 transit of Venus. See **TROVE Adventure** map for the list of sites.]



The Transit of Venus (TROVE) Adventure is a treasure hunt to learn about the June 5 phenomenon and to be rewarded with protective eyewear that allows you to **view safely** the solar spectacle. Each participating site has a keyword and an exhibit with information relating to the Transit of Venus. Visit at least ten **sites** and collect the keywords. Answer as many **questions** as you can from the information at those sites. Once you finish, bring your list of answers and keywords to one of the three drop-off sites below by Thursday, **May 31**, to receive solar shades for your family.

Notre Dame Community
Relations
217 South Michigan Street
South Bend, IN 46601

Victorian Pantry
226 West Cleveland
Road
Granger, IN 46530

Glance Eyewear Gallery
7220 Heritage Square Drive, Ste.
560
Granger, IN 46530

View **TROVE Adventure** in a larger map with list of sites

Here are the treasure hunting tools you need to find Keywords at each site:

1. Map of the TROVE Adventure treasure hunting grounds in Michiana:
<http://maps.google.com/maps/ms?msa=0&msid=215418242007555476727.0004bc9e436b7aacefa6c>
2. List of **participating TROVE Adventure sites** with space for you to write each Keyword.
3. List of **questions** that can be answered from clues at the sites.



Good luck, treasure seekers!

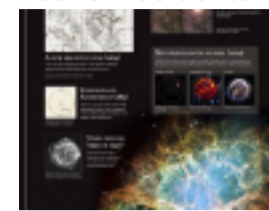
AstroFest in South Bend on April 28

Roll up your sleeves and venture deep into space at the family AstroFest celebration on April 28, 2012, at Union Station in South Bend, IN. For two short hours, 2:00-4:00 p.m., astronomers and educators will guide children and adults alike through hands-on exploration of the solar system, with emphasis on the 2012 Transit of Venus. Multiple exploration stations will be complemented by a large 12-panel exhibit featuring some of the greatest images of the Hubble Space Telescope. From Union Station you can also launch your own quest for treasure with the TROVE Scavenger Hunt. Admission to AstroFest is free.



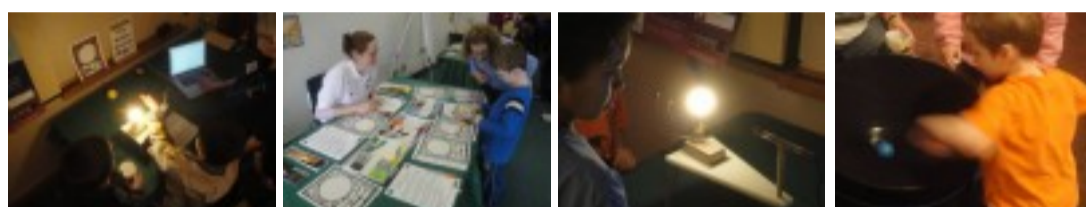
The transit of Venus is a rare planetary alignment that will be visible for the last time in our lives the evening of Tuesday, June 5, 2012. That evening, Venus appears in silhouette as it passes in front of the sun. Transits help us to establish our place in space, from measuring the size of the solar system to discovering planets in the habitable zone around distant stars. When a transit of Venus last happened, Google deemed it the most popular event in the world for the entire month of June 2004! Come see what all the fuss is about, and learn how to view this solar spectacle safely.

The TROVES Adventure is a fun treasure hunt with regional businesses through the month of May to prepare the community for the transit of Venus. Find clues in storefront windows and win free solar shades to witness safely the celestial apparition on June 5. Michiana is a hub for transit of Venus attractions, with unique opportunities for residents and visitors at www.transitofvenus.org/trove.



The Visions of the Universe exhibit is on loan from the Space Telescope Science Institute. The majesty of Hubble images is supported with descriptive text and local astronomers who can answer your questions about these profound images. The exhibit includes twelve panels that feature key astronomical discoveries from the past 400 years since the invention of the telescope. The exhibit also highlights the technological advancements that made these discoveries possible. Topics range from celestial objects within our own "cosmic backyard" — the Sun, the Moon, Mars, and Saturn — to those beyond the realm of our solar system — including comets, stars, nebulae, and galaxies.

Come prepared to be active



Space is big, and it demands a big space to convey it. **Union Station**, located immediately south of Coveleski Stadium on South Street, has been greatly renovated and welcomes the public to AstroFest.



You may park on the street for free and enter through the front doors of Union Station.

We look forward to engaging you and your family at AstroFest on Saturday, April 28, 2012, at Union Station in South Bend, IN.

Arise, Ye Artists, For Ale and Astronomy



Not much time for wordsmithing. Basically, a fabulous *Venusian* ale is made, and now it needs some cool design for related posters and merchandise that celebrate the 2012 transit of Venus. I'm putting out a call to you, friends and artists with a high regard for beer and science, to create and submit a design for consideration in the selection process.

You have two options for submitting your entry. First, and preferred, you can send your digital artwork directly to our local printer (Ryan Wanke at ryan@sharpeyeframing.com) that will print and mount your image (for fee, below) for display at the brewery alongside the **TROVE Art Exhibit**. This gives your artistic expression an audience with links to your studio, website, or contact information. You choose (and pay for) the size of your displayed art:

- 24x36 print and mount -- \$40.00
- 16x24 print and mount -- \$25.00
- 11x17 print and mount -- \$15.00

Second, you can simply **email** your artwork for no fee for consideration by the selection committee. You'll be in the running for the design, but your work won't be displayed publicly unless you are selected as the winner.

Bottom line: Artists, start making your design now for inclusion in the design contest. In crafting your art, think along the lines of what will look good on commemorative pint glasses, posters, and other memorabilia. Contact Ryan Wanke at ryan@sharpeyeframing.com to arrange payment and submission of your art. Deadline is **May 6** (yeah, I know, not much time; sorry, I've been a bit overwhelmed planning **TROVE** events, managing this website, and **other happenings**).

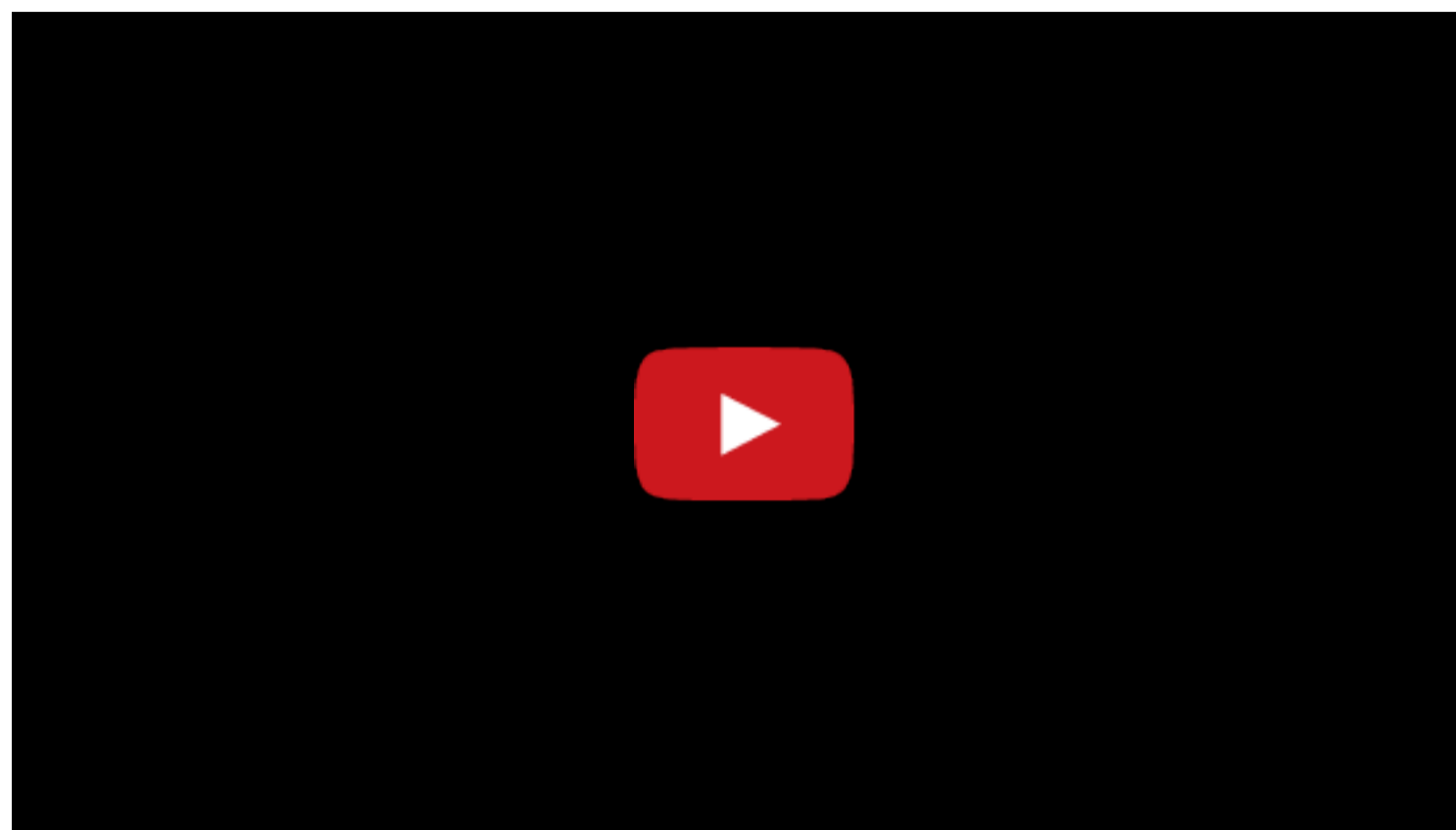
The winning artist will be asked to permit his/her artwork to be on merchandise to be sold by The Livery. For compensation the winner will be showered with much glory and transit of Venus prestige, and if you are in the neighborhood I'll put a significant amount of beer in a glass or other container with your name on it. I would expect you'll get a few samples of that merchandise to which I referred. And I'll feature your art in an article at www.transitofvenus.org. Gosh, what artistic transit of Venus enthusiast wouldn't want to contribute to the 2012 transit of Venus experience through a beer legacy? Lastly, for posterity, the winning art design will



be included in the Transit of Venus Time Keg (sshhhh, this hasn't been publicly announced yet), a sort of time capsule in a vintage beer keg to be sealed at the conclusion of the 2012 transit of Venus.

One tip: While I welcome colorful artwork, I expect the judges with an interest in printing the logo on pint glasses, for instance, will prefer one- or two-color artwork. You're welcome to submit your cool design in full blazing color, with an optional "for printing" version in fewer colors.

The Venusian ale has been [tapped](#), but will not debut until May 7 for the opening of the TROVE Art Exhibit.



[Read more: Arise, Ye Artists, For Ale and Astronomy](#)

Black Drop Effect Bistro Coffee

LAST_UPDATED2



Victorian Pantry in Granger, IN, unveiled **Black Drop Effect Bistro Coffee**, its contribution to the 2012 transit of Venus celebration. The very dark coffee pays homage to the famous [black drop effect](#), a visual anomaly when circular Venus appears to elongate like a drop when it is near the inner edge of the sun. Astronomers attempting to gauge the instant when Venus just "touches" the solar limb have been confounded for centuries by this ill-timed quirk.

Chef and restaurant owner Steve Stogdill roasted *Black Drop Effect Bistro Coffee* to be "characterized by high grade beans, heavy body, and low acid with a special finish on your palate." Living up to its name, the coffee is very dark, yet Stogdill notes, "Dark coffee does not need to be bitter, and this proves that."



In 1999 the TRACE spacecraft imaged a transit of Mercury, from which astronomers determined the black drop effect is not a function of atmosphere but more a function of the telescope optics and of solar limb darkening. See the [black drop effect FAQ](#).

The *Black Drop Effect Bistro Coffee* label pays tribute to the stained glass window of St. Michael's Church in Hoole, England, where Jeremiah Horrocks first recorded a transit of Venus in 1639. In subsequent centuries the [church has commemorated](#) the historic sighting and Horrock's character with architectural details such as the stained glass windows. Each pane is filled with an image related to the transit of Venus. The text within the banner, Come Sip or Ship, invites patrons to enjoy the coffee at [Victorian Pantry](#) or to purchase the coffee and have it shipped.

An 11-ounce foil pouch of coffee, whether whole bean or ground, costs \$11.99 USD plus shipping. To place an order, email Chef Steve at BlackDropEffectCoffee@gmail.com or BlackDropEffectCoffee@gmail.com.

What's New?

LAST_UPDATED2

Year 2013

Sept 3	Added file: http://transitofvenus.org/docs/Medellin-v58-4.pdf 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.
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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>

Year 2012

Dec 12	<p>Added to 2012 page: http://mnrasl.oxfordjournals.org/content/early/2012/12/10/mnrasl.sls027.full.pdf?keytype=ref&ijkey=0VPPUJl6ZcCKg5G</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 prezzi 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> <p>Viewing Great; Timing Difficult. A recap of Chuck Bueter's day in the sun on June 5, 2012.</p>
June 5	2012 Transit of Venus!
June 4	<p>misc/359-time-to-set-sail</p> <p>Time to set sail as we are on the cusp of the transit of Venus. See you on the other side.</p>
May 31	<p>Added to June 2012:</p> <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	<p>Added to Misc.: misc/358-you-can-learn-a-lot-from-a-dot</p> <p>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.</p>
May 15	<p>Added to Links: Video & New Media:</p> <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	<p>Added to Eye Safety: http://youtu.be/4RGr9FcBrSM</p> <p>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.</p> <p>Added to FAQs: faq/354-can-i-use-welding-glass-to-view-the-sun</p> <p>FAQ describes the limited ways a #14 shade welding glass can be used, though the trend is to dismiss the</p>

	<p>technique in favor of established and practical materials.</p> <p>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 stargazing, and a post-transit celebration with Venusian ale at a Michigan microbrewery.</p>
May 10	<p>Added to Latest News:</p> <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 <p>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 value of the transit of Venus expeditions for navigational gain.</p> <p>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</p> <p>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.</p>
May 2	<p>Added to Sun Funnel Instructions: Da-Lite screen can be purchased from http://www.bigscreencenter.com/Venus-Transit-Sun-Funnels/4476.htm.</p>
April 27	<p>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.</p>
April 25	<p>Added to Calendar: http://transitofvenus-yerkesworkshop.eventbrite.com/ Two programs for educators on May 2, 2012, at Yerkes Observatory, Williams Bay, WI</p>
April 23	<p>Added to Latest News:</p> <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.
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/astronomy/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
	<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

April 9	<ul style="list-style-type: none"> • 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.
	<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
March 18	<p>Updated Build a Sun Funnel for Group Viewing With a Telescope: 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>
February 16	<p>Added to The Arts: education/the-arts/333-phm-art-contest 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</p>

	Woodcock, "Key features of the programme are astronomy, adventure, leadership, team building & professional development."
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>
January 23	<p>Added to TROVE: 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, <i>The Universe in the Classroom</i>, 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.

	<ul style="list-style-type: none"> • 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.

Year 2011

[Read more: What's New?](#)

Great Lakes Treasure in Kalamazoo



Great Lakes Treasure: The Transit of Venus will be featured at the general meeting of the Kalamazoo Astronomical Society (KAS) on Friday, April 17, at 7:00 p.m. Details are online at <http://www.kasonline.org/schedule.html#apr>. The talk (by this author) will introduce the historical significance of the transit of Venus and the modern role of the transit method in the quest to find exoplanets. We will review the 2004 transit of Venus experience and discuss the [collection of events](#) occurring in northern Indiana and southwestern Michigan (dubbed Michiana) in anticipation of the June 5 celestial event.

The KAS has an integral role in providing telescope viewing opportunities for the public, with the club setting up a variety of gear June 5 at Warren Dunes State Park overlooking Lake Michigan. They also will have scopes set up during the [May 20 solar eclipse at sunset](#).

On May 4, 2012, Dr. Eli Maor, author of the book *Venus in Transit*, will present his perspective to the KAS.

Call for Art: Transit of Venus in Pastel

The [Northern Indiana Pastel Society](#) (NIPS) announced a call for art for the *Transit of Venus in Pastel* exhibit. From the [December 2011 Newsletter](#):

Harris Branch
Mishawaka-Penn-Harris Library
51446 Elm Road, Granger IN 46530



May 1 to June 9, 2012

Reception 7:00 to 8:30 p.m., Wednesday, May 9, 2012

Deliver art to the gallery 10:30 a.m. to 12:20 p.m. Saturday, April 28. Art will be released 10:30 to noon Saturday, June 9.

Entrants must be members of NIPS.

Scientists and astronomy enthusiasts are gearing up for this heavenly event, June 5, 2012, when the planet Venus passes between Earth and the sun. We will see the distant planet as a small dot gliding slowly across the face of the sun. Historically, this rare alignment is how we measured the size of our solar system. Visit www.transitofvenus.org for more information.

Members are invited to use ideas such as Venus, planets, sun, moon, stars, space, sky, sunset, new worlds, habitable planets or related themes. The art also will be featured in an online gallery linked to other Transit of Venus events around the world.

Events: APS Museum in Philadelphia

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Elaine Wilner



The American Philosophical Society (APS) Museum in Philadelphia will be presenting a variety of activities related to the Transit of Venus, beginning May 25, 2012, including a small exhibition featuring the telescope David Rittenhouse used for observing the 1769 Transit; hands-on activities with Derrick Pitts, chief astronomer at The Franklin Institute; and a talk by Andrea Wulf, author of the new



book *Chasing Venus: The Race To Measure the Heavens*.

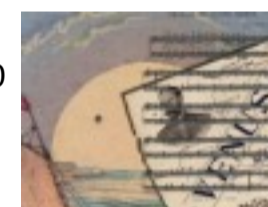
A [press release](#) conveys that APS played a vital role in the world-wide observation of the transit in 1769 and that several of the instruments used by Rittenhouse and Ewing will be on display.

For details, please contact the museum:
American Philosophical Society Museum
104 S. Fifth Street
Philadelphia, PA 19106
www.apsmuseum.org

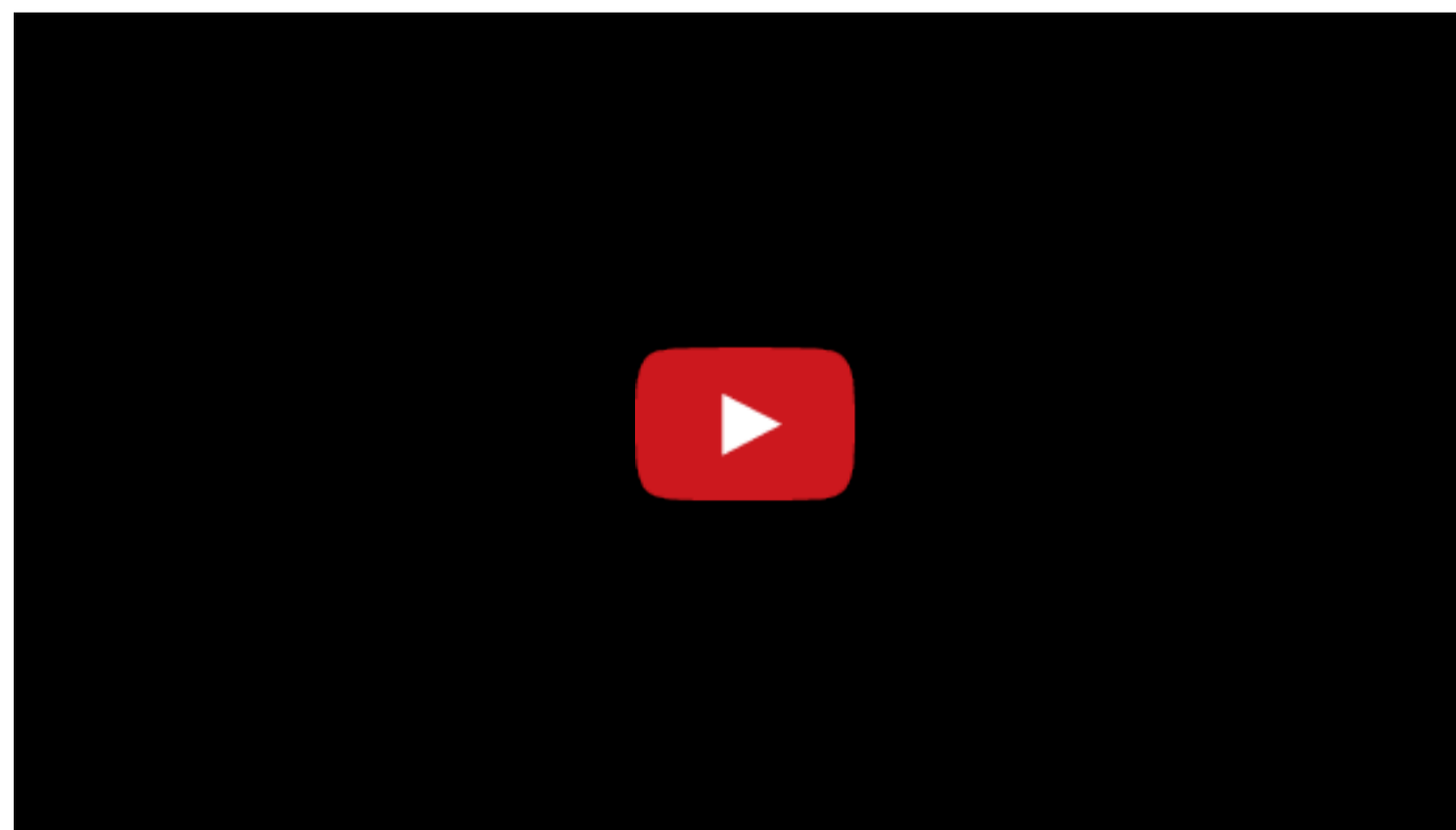
Sousa on March 8



The Penn Symphonic Winds will perform the *Transit of Venus March* by John Phillip Sousa on March 8, 2012, at the Penn Fine Arts Festival Concert, which begins at 7:30 p.m. Director Glenn Northern announced the performance will be in the Penn Center for the Performing Arts, at Penn High School ([map](#)) in Mishawaka, IN, USA. Sousa had a particular interest in the celestial phenomenon, [writing both](#) the *Transit of Venus March* and decades later a novel *The Transit of Venus*. Penn High School students also [performed Sousa's march](#) in 2004 when the transit of Venus occurred previously in the 21st century.



Meanwhile, the [cover](#) of the March 2012 issue *Planetarian-Journal of the International Planetarium Society* features Sousa sheet music, accompanying the article [Going All Out for Venus](#). The cover and article are reprinted with permission of the International Planetarium Society.



More Articles...

- [All-Aboard the Transit of Venus](#)
- [Transits of Venus: Looking Forward, Looking Back](#)
- [Archived Website From 2004](#)
- [Universe in the Classroom Features Transit of Venus](#)
- [QR Code for Transit of Venus Website](#)
- [Transit of Venus Brochure](#)
- [Poster: Countdown to the Transit of Venus](#)
- [Transit of Venus Project Launches](#)
- [Appeal to Be Bold](#)
- [Promo for NASA EDGE Coverage in 2012](#)
- [Solar Dynamics Observatory to Witness the 2012 Transit of Venus](#)
- [Seeking Goddess for Instant Astronomical Gratification](#)
- [MichianaSTEM to Feature Imaging of Transits](#)
- [Letters to Leaders](#)
- [Ballad of Captain James Cook](#)
- [Taylor Designing ToV Graphics](#)
- [Launch of the New ToV Website](#)
- [One Day at a Time](#)

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