



400 YEARS of the TELESCOPE

A JOURNEY OF SCIENCE, TECHNOLOGY AND THOUGHT

A publication of the
US IYA2009 Program



October/November 2009

Production Update

Kris-crossing the Pond

By Kris Koenig

Having to go to either Paris or the White House is not a choice most producers ever have to make but last month I had such a choice thrust upon me. At the beginning of September we had been invited by NASA to attend the October White House star party. Our participation included providing 200 copies of the *400 Years of the Telescope* DVD and book to the attending students, thanks to a generous donation from Ball Aerospace, and to op-

Continued on page 10



400 Years of the Telescope producer Kris Koenig worships *Parisienne* with an emotional rendition of Sinatra's classic hit New York, New York.

Featured Observatory

Community is Seeing Stars

It's hardly an exotic mountain-top lair in the midst of the Pacific ocean, but for many in the local community, it's the first step on an adventure to the heavens.

In planning and development for nearly a decade, the Kiwanis Chico Community Observatory (KCCO) saw first light in 2001 with a 10" refracting telescope, built by local resident and amateur astronomer, Jim Schwartz, just in time for the Leonids in November of that year.

The 10" refractor has since been retired, superseded by two 14" Celestron

Continued on page 8

IYA USA

Two New Citizen Science Opportunities

By Douglas Isbell

US Single Point of Contact IYA2009

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Galileoscope eBay Auction

Read a blog post by Pamela Gay on the Galileoscope and the eBay auction. <http://networkedblogs.com/p12393749>

Galileoscope boxes were autographed during the most recent Dragon*Con convention by celebrities from Battlestar Galactica and Ghost Hunters International and were auctioned off on eBay in order to buy Galileoscopes for schools in need of science equipment. The auction raised \$470! Thank you to Pamela Gay for making this happen!


First Galileo Teacher Training Program Workshop in the US is a Success

"In the Footsteps of Galileo", an initial 2-day workshop to train US teachers on how to convey basic astronomical concepts in a hands-on way, took place near San Francisco on Sept. 12 & 13, 2009, as part of the 121st Annual Meeting of the Astronomical Society of the Pacific (ASP). Approximately 30 teachers from around the United States participated, and were joined by five astronomy education specialists (from as far away as Australia and Israel) who want to replicate the workshop locally. The workshop was

Continued on page 9



KCCO co-director Anita Ingrao stands in the center of the Shoemaker Open Sky Planetarium, the world's first outdoor planetarium.



Giant of the Solar System

LARGEST: NASA's New Spherical Movie Thinks Big

*Image courtesy of NASA and
the Hubble Space Telescope*

From swirling winds to astounding rotational velocity to unimaginable size, Jupiter demands nothing less than a list of superlatives. But where general description sets the stage, LARGEST parts the curtains on humanity's experience with the fifth planet.

This is big.

But you know that much already.

Three hundred and eighty million miles from Earth, the solar system's largest planet spins like a sizzling top in the night, massive and powerful beyond all comparison short of the sun itself. It's therefore only fitting—and certainly about time—that the fifth planet receive its proper cinematic due, set naturally on the most appropriate cinematic platform. With the movie LARGEST, Jupiter comes to *Science On a Sphere*.

LARGEST examines the gas giant like a work of art, like a destination of celestial wonder. Starting with the basics, the movie examines the gross anatomy of the immense planet. From swirling winds to astounding rotational velocity to unimaginable size, Jupiter demands nothing less than a list of superlatives. But where general description sets the stage, LARGEST parts the curtains on humanity's experience with the fifth planet. The movie takes us on a journey to this immense sphere via dramatic fly-bys with some of the most astounding robotic probes ever designed. Then, with NASA instruments trained on the striped behemoth, the drama really begins.

Celestial Giant, Media Superstar

As recently as the summer of 2009, Jupiter once again became the subject of media attention, following extraordinary events there visible from Earth. According to images collected from astronomers around the world, an **immense object collided with the fifth planet**, something large enough that the resulting blast scar nearly matched the size of our the entire Earth.

This cosmic crash reminds us that the solar system is a dynamic, kinetic place. Things move around; things collide.

LARGEST tells the tale. In a now legendary encounter between a huge comet and the implacable fifth planet, viewers will experience the doomed Shoemaker-Levy 9 as it falls into Jupiter's great gravitational well and crashes into the planet's colorful bands of dense atmosphere. But LARGEST takes the story one step further, suggesting vital relevance of such an encounter there on Jupiter for everyone here on Earth. The implications not only may surprise you, but also provoke contemplation. Any way you look at it, Jupiter matters.

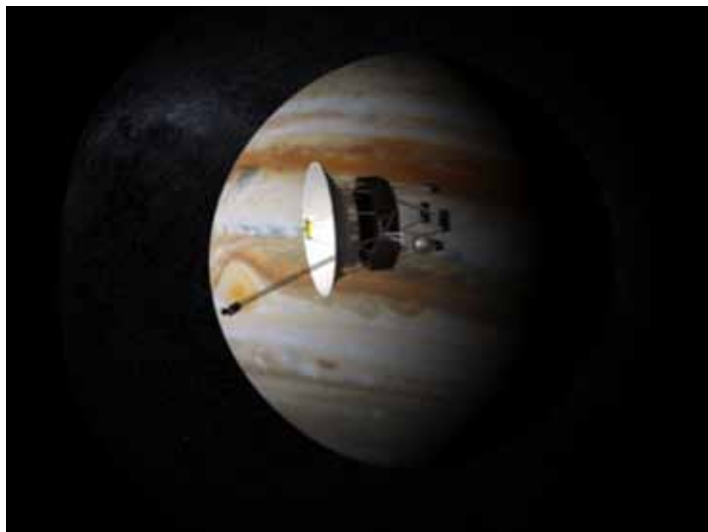
Continued on page 3

400 YEARS *of the* TELESCOPE

LARGEST continued from page 2

The Data Dilemma

Facts demand data. Telling a factual story like LARGEST demands lots and lots of data—the kind of high quality, one-of-a-kind data for which NASA is famous. But in the making of



Voyager II's encounter with Jupiter was not only a scientific triumph, but an engineering one, too. The mission used the planet's immense gravity to boost it on a journey that continue to this day. Image courtesy of NASA.

LARGEST, the moviemakers faced a tremendous challenge: there simply isn't much to go on as far as data that describes and displays the complete planet. What we know about the Jovian system is largely based on distant observations and relatively brief encounters with desperately rare interplanetary probes.

Early on, the production team also decided to minimize the use of conceptual imagery. In other words, the team decided not to mock up an “artificial” planet in their labs. But in deciding to use as much real data as possible to tell the story, the team faced dramatic creative dilemmas.

The best example is the challenge of showing a fully spherical image of a place rarely observed from all sides. For color images of the entire planet, the production team took fourteen known frames of data collected by the Cassini spacecraft and squeezed them for every possible drop of visual power. Through a sophisticated process of analysis and interpolation, one of the lead data visualizers took known values for wind speeds and applied that information to the various corresponding points in the image. Extended over time and applied to each subsequent frame, the result is an astounding animation of a fully dynamic planet, with moving, grinding clouds cascading around the sphere like liquid.

In other places where image size or digital resolution or angles of observation simply do not provide clear views of the planet, the production team had to find other ways of telling the story. In several places, they turned once again to data, but this time not the

kind of data that directly yields images.

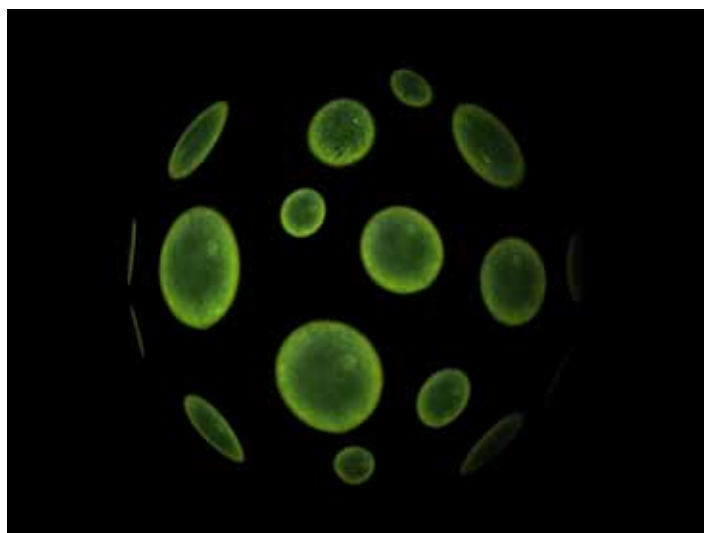
Using a table of coordinates that mathematically describe where objects in space may be at specific times, visualizers calculated the orbits of objects in Jupiter's busy sky, a swarming hive of natural satellites. The result is astonishing and beautiful. At the center of the image, we see a familiar orange and red planet, set against a seamless starry background. In close to the giant, a series of nearly concentric orbits of Jovian moons circle endlessly, speeding around the immense parent at ferocious rates.

Then the camera pulls back, and for a moment nearly twenty million miles of emptiness unspools. Jupiter falls away, a speck disappearing into the starry void. But then, suddenly, a huge cluster of new orbital tracks come tumbling onto the screen. These distant moons are distributed much more chaotically relative to the planet. The team came to call this tangled, crazy web of nearly forty orbits “the bird's nest”. The mass of intersecting, overlapping trails seems to fully surround the now distant, clearly powerful mass somewhere deep down inside the sphere of gravitational influence.

Ultimately, LARGEST presents Jupiter in a way that tells the story of our grandest planetary neighbor like it's never been done before. The movie compels and excites as it informs and educates.

“LARGEST” opens around the country and in several locations around the world on September 15, 2009. For a partial list of Science On a Sphere theaters: http://www.nasa.gov/centers/goddard/multimedia/frozen/soas_locations.html.

Reprinted courtesy of NASA.



Life on Earth, depicted by these simple microscopic plant cells, may not have had a chance to evolve if Jupiter hadn't helped clear the early solar system of debris. Image courtesy of NASA.

the sites such searches encounter are full of nonsense and misunderstanding, produced often by people who have written books on coming disaster that they are trying to sell.

The end of the world?

No Doomsday in 2012, But Lots of Profits for Purveyors of Doom

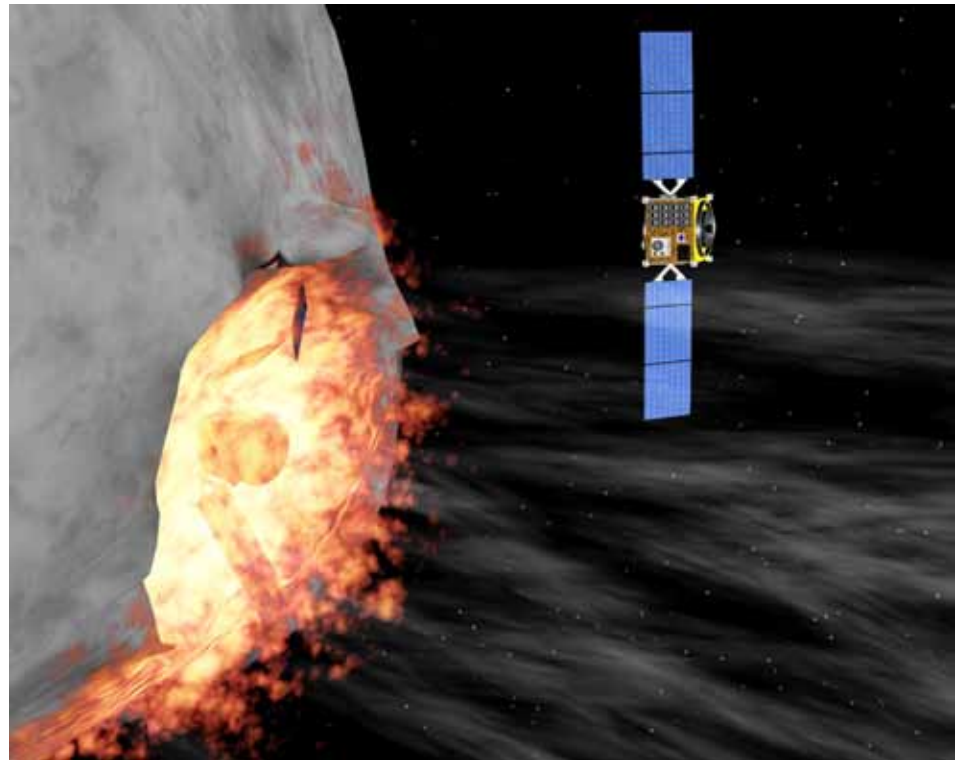
By Andrew Fraknoi

The widespread Internet belief that Dec. 21, 2012, will be doomsday for planet Earth because some astronomical event will destroy or decimate our planet is a complete hoax, according to NASA scientist David Morrison. His concise summary of the claims and the scientific response has been published by the Astronomical Society of the Pacific as a public service at: <http://www.astrosociety.org/2012>

For several months, NASA and many astronomers have received increasingly worried letters and e-mails from members of the public about the possibility, widely touted on the Internet, that the world will end in 2012. Many mechanisms for doomsday are being proposed, including a collision with a fictional planet called Nibiru, deadly activity on the surface of the Sun that lashes out at Earth, and alignments with the center of our galaxy. David Morrison has coined the term "cosmophobia" -- fear of the cosmos -- for these concerns, and has seen a huge increase in the phenomenon this year.

Dr. Morrison, a world-renowned expert on the solar system (and asteroid impacts), also serves as the public scientist for NASA's "Ask an Astrobiologist" service, where he answers questions for the public. He has received so many questions about 2012 and the end of the world that he felt he had to investigate and set the record straight.

One of his most interesting findings is that the distributors of the science fiction motion picture "2012", to be released this November, are purposely feeding the flames of the Internet panic (in what is called a viral marketing campaign) by creating fake science websites and encouraging people to search for "2012" on the web. Most of



Morrison's article is in the form of questions and answers, and is followed by a resource guide that allows readers to find even more scientific information about why no 2012 disaster is in the cards. There are many reasons to worry about the future of planet Earth, of course, but absolutely no reason to single out the winter solstice of 2012 as a special time to be concerned.

For an annotated guide of resources for responding to claims of astronomical pseudo-science, from astrology to crop circles, and ancient astronauts to moon landing denials, visit <http://www.astrosociety.org/education/resources/pseudobib.html>

Founded in 1889, the Astronomical Society of the Pacific is an international scientific and educational organization, with a goal of providing reliable, authoritative information to help the public understand and appreciate astronomy. Their website at <http://www.astrosociety.org> has a host of information and resource guides for those who want learn more about the exploration of the universe.

Sancho is monitoring the effect of Hidalgo's impact with an asteroid. Don Quijote is an asteroid-deflecting mission currently under study by ESA's Advanced Concepts Team (ACT). Its aim is the development of a means to tackle asteroid impacts. To this purpose ESA has selected two target asteroids (2002 AT4 and 1989 ML). The current scenario envisages two spacecraft in separate interplanetary trajectories. One spacecraft (Hidalgo) will impact an asteroid; the other (Sancho) will arrive earlier at the target asteroid, rendezvous and orbit the asteroid for several months, observing it before and after the impact to detect any changes in its orbit.

Credits: ESA/Deimos-Space SA

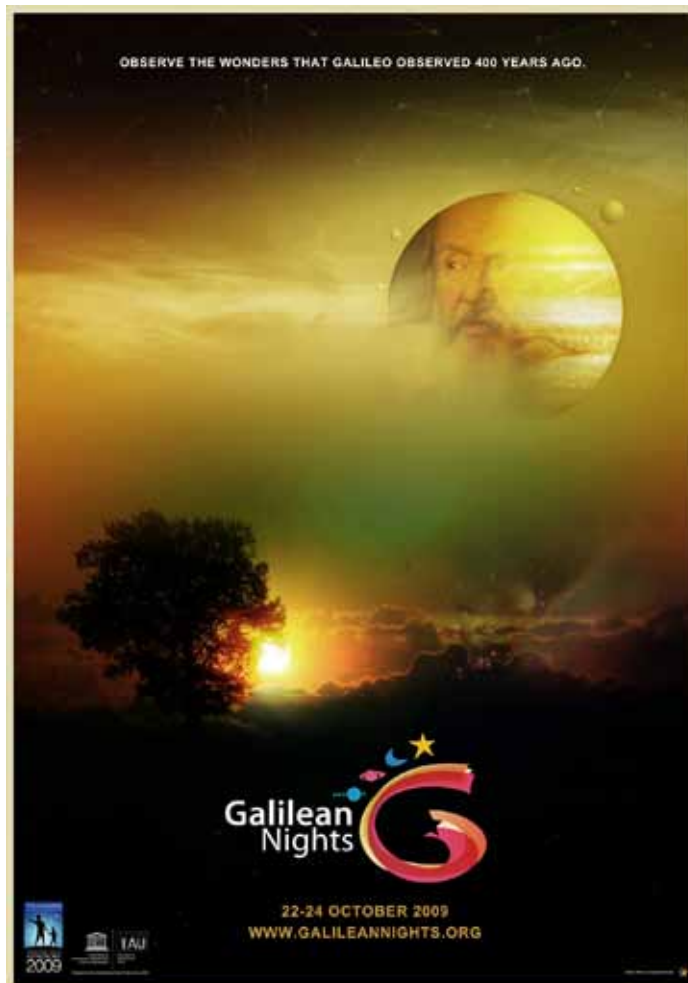
Galilean Nights: Global Astronomy Event Invites the World to Discover Our Universe

Wind the clock back 400 years and follow in the footsteps of a giant experience now just what first amazed Galileo in 1609! The latest Cornerstone project of the International Year of Astronomy 2009 (IYA2009), Galilean Nights, will see thousands of public observing events around the world replicating Galileo's observations and bringing what he saw 400 years ago to the public of today. From 22 to 24 October, amateur and professional astronomers, science centres, schools and all interested groups are invited to be part of the Galilean Nights project and to register their events on the project website www.galileannights.org. We can all make this a worldwide success.

The Galilean Nights builds on the unprecedented success of April's 100 Hours of Astronomy, another IYA2009 Cornerstone project. Over three nights amateur and professional astronomers, and enthusiasts, will share their knowledge and enthusiasm for the Universe by encouraging as many people as possible to look through a telescope at our neighbouring planets. The focus for the Galilean Nights is on the observations made by the Italian astronomer Galileo 400 years ago, including those of Jupiter and the Moon, which will be well-positioned in the night sky for observing during the event. For many members of the public it will be their first look through a telescope, when they can see such breathtaking sights such as the cloud bands of the gas giant, Jupiter, and intricate details on our cratered Moon. It will be an unforgettable experience.

Anyone, from any background and with any level of experience is encouraged to organise events, from one person sharing the

night sky through a telescope with a small group of neighbours and friends, to large astronomical groups holding major observing sessions in public areas. To keep track of developments, assist with promotion and to help people to find local Galilean Nights activities, all events should be registered on the project website: www.galileannights.org. Hundreds of events all over the world have already been registered and the number is increasing every day.



IYA2009 Executive Committee Chair, Catherine Cesarsky says, "Amateur observations have always played an important role in astronomy, a fact highlighted by one of the most exciting events of this year when it was an amateur astronomer who noticed that Jupiter had suffered a massive impact by an asteroid or comet. So it is fitting that Galilean Nights continues this tradition as thousands of amateur astronomers and the public will turn their attention to Jupiter and other objects that Galileo observed 400 years ago."

Stunning images of distant objects in the Universe are well known around the world and do more to bring astronomy to the wider public and to inspire future astronomers than words ever could. The public have been set the challenge of capturing the inspirational nature of our local solar neighbourhood in the worldwide Galilean Nights photography competition. Run in partnership with Europlanet, the Galilean Nights competition encourages anybody with an enthusiasm for astronomy to try a different approach to their observations and create their own inspirational photographs of our planetary neighbours. The contest is being officially launched today during Europlanet's European Planetary Science Congress, held this year in Potsdam, Germany.

Four hundred years since Galileo's telescopic observations revolutionised our view of the Universe, the public will once again be turning their attention to the heavens. People all around the world are encouraged to take part in the Galilean Nights Cornerstone project and experience for themselves the same sense of awe and wonder that Galileo must have felt.

Links

Galilean Nights website: www.galileannights.org

IYA2009 website: www.astronomy2009.org

European Planetary Science Congress website: <http://meetings.copernicus.org/eps2009/>

For more information:

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Shopping Centers Across the U.S. to Experience The World At Night

An exhibit of stunning photographs of the night sky as viewed over many of the most beautiful natural, historic and cultural landmarks in the world is being shown at 24 shopping centers across the United States from now through November 8.

Known as The World At Night, the exhibit is a special project of the International Year of Astronomy 2009 (IYA2009), an ongoing global celebration of the science of astronomy and its contributions to society over the 400 years since Galileo's first use of the telescope.

Among the well-known sites featured in The World at Night (TWAN), are Yellowstone National Park in the United States, the Parthenon in Greece, and magnificent monuments across Asia, all set against the grandeur of the starry sky. Supported by Developers Diversified Realty for the properties it manages, this exhibition is the largest showing of TWAN mounted in the United States during IYA2009, according to the organizers. More than thirty countries have hosted TWAN exhibits this year.

"We have found that TWAN images not only capture the public's imagination, but also bring educational value," says Project Director Babak Tafreshi.

Each of the shopping centers hosting a TWAN exhibit will add localized educational elements such as contests, family workshops in astronomy, "Dancing Under the Stars" or "Movies Under the Stars," and the participation of Boy Scouts and Girl Scouts working toward their astronomy merit badges.

TWAN is collaborating with a variety of venues around the world to hold major exhibitions and educational events during IYA2009 and beyond. These exhibitions are meant to enhance the offerings of any museum or public space with eye-catching photographs produced by the TWAN team of specialized photographers. The exhibitions are designed to be shown either indoors or outdoors, and can be organized either as standalone exhibits or in conjunction with other IYA2009 exhibits or cultural or educational activities. TWAN ex-

TWAN aims to be a bridge between art, humanity, and science. "The eternally peaceful sky looks the same above all the landmarks and symbols of different nations and regions, attesting to the truly unified nature of Earth as a planet rather than an amalgam of human-designated territories," says Project Director Babak Tafreshi. "We are all one family under one sky."

See more than 1,500 images from TWAN: <http://www.twanight.org>.

International Year of Astronomy 2009: <http://www.astronomy2009.org>

Astronomers Without Borders: <http://www.astronomerswithoutborders.org>

Stars Over Developers Diversified Realty program: <http://www.staroverddr.com>



Buena Park Downtown Shopping Center, Buena Park, California. Photo: Wally Pacholka

hibitions will take place in a variety of U.S. cities, large and small:

About The World at Night

The World At Night (TWAN) is an international program by Astronomers Without Borders to create and exhibit a collection of stunning photographs and time-lapse videos of the world's most beautiful and historic sites against a nighttime backdrop of stars, planets and celestial events. More than 40 of the best landscape photographers, coordinators and consultants in 25 countries have contributed to TWAN.

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Sidewalk astronomy to span the US in celebration of Galilean Nights

View Jupiter better than Galileo did

Astronomy enthusiasts across the globe are breaking out their telescopes this weekend (October 22-24) in a coordinated effort to help hundreds of thousands of people experience their own "Galileo moment" of awe and discovery when seeing the planet Jupiter and its four largest moons.

More than 800 public observing events in over 50 countries are being organized as part of "Galilean Nights," a cornerstone project of the International Year of Astronomy 2009 (IYA2009). More than 75 events in the United States are listed on the international Galilean Nights Web site at www.galileannights.org.

"Our goal is to enable people of all ages to share the wonder of the night sky by seeing the same objects that legendary Italian astronomer Galileo Galilei first observed scientifically four centuries ago," says Douglas Isbell, the U.S. national Single Point of Contact for IYA2009. "We hope to give many people their first glimpse of the marvels of the Universe through a telescope, showing them breathtaking sights such as the cloud bands of Jupiter, and the rocky desolation of craters and mountain ranges on our Moon."

Large U.S. events are being planned for Inwood Hill Park in New York City and Hilo, Hawaii, for example. A wide variety of other events are scheduled at places as diverse as a Starbucks coffee shop in Alabaster, Alabama; Wilhemina State Park in Mena, Arkansas; the Amoeba music store in Hollywood, California; Colorado Astronomy Day in Brighton and Chamberlin Observatory in Denver; the Embry-Riddle University observatory in Daytona Beach, Florida; sidewalk astronomy at the corner of North and Wells streets in Chicago; a Radio Shack in Waterloo, Iowa; Chabot Science Center near Oakland; a Border's Bookstore in Wichita, Kansas; the Longway Planetarium in Flint, Michigan; Bot-

tomless Lakes State Park in Roswell, New Mexico; the University of Texas Arlington planetarium; the Great Salt Lake Nature Center in Utah; the Carnegie Institution of Washington, DC; and the Green Bank Science Center in West Virginia.

As well as looking at our planetary neighbors through a telescope, people are encouraged to photograph what they see and share the sights with the world through the Galilean Nights astrophotography competition. Photographers of all levels of experience are enthusiastically taking part in the competition as they try to produce their own captivating photographs of the Universe. Anyone with a camera and an appreciation

of the night sky can take part.

Entries using the IYA2009 cornerstone project Galileoscope are particularly encouraged, Isbell says. More than 125,000 of these high-quality, hands-on telescope kits have been produced, and units are still available for order for \$20 each, or \$15 each for orders over 100, at www.galileoscope.org.

In addition to these activities, several observatories are making their facilities available to the world for remote observing sessions, allowing people to take photographs of astronomical objects from their own personal computers.

The Web site also includes lots of resources and downloadable materials for organizations interested in hosting their own events, such as the logo in numerous languages, information on sky objects, and pre-prepared presentations.

"Please register your events and report back to us with your results so we can make a

good estimate of how successful the event was around the world," Isbell adds.

The vision of the IYA2009 is to help the citizens of the world rediscover their place in the Universe through the day and night-time skies the impact of astronomy and basic sciences on our daily lives, and understand better how scientific knowledge can contribute to a more equitable and peaceful society.

The cornerstones and special projects of IYA2009 aim to stimulate worldwide interest, especially among young people, in astronomy and science under the central theme, "The Universe, Yours to Discover." IYA2009 events and activities hope to promote a greater appreciation of the inspirational aspects of astronomy that embody an invaluable shared resource for all countries.

For more information, visit:

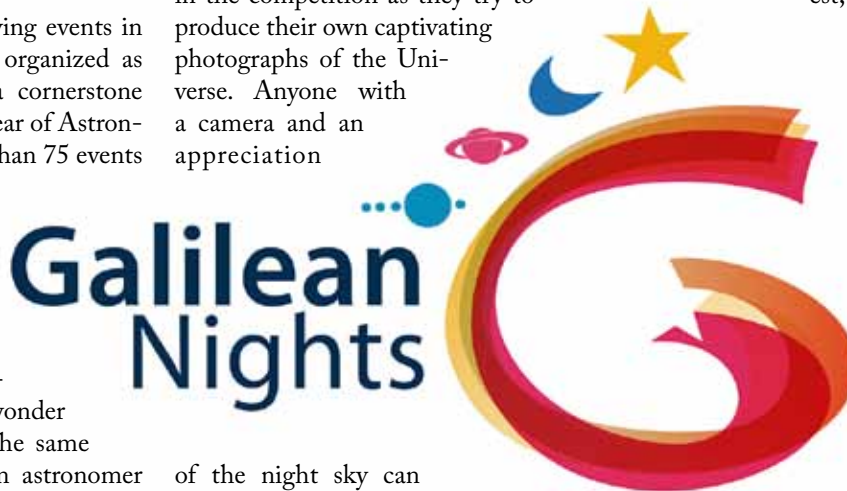
www.galileannights.org
www.astronomy2009.us
www.astronomy2009.org

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400 YEARS *of the* TELESCOPE

KCCO continued from page 1

Schmidt-Cassegrains.

The Celestrons collect more light than the earlier telescope, enabling fainter objects such as nebulae and galaxies to be viewed. Each is computerized with its own “go-to” system, enabling the operator to automatically locate most objects in the night sky.



Twin Schmidt-Cassegrains bring the mysteries of the heavens closer for many locals at the Kiwanis Chico Community Observatory.

A solar telescope has been recently mounted to one of the Celestrons. This smaller-aperture telescope is used to safely view solar flares and sun spots on, appropriately one might say, Sundays.

The observatory is complemented by the Shoemaker Open-Sky Planetarium, the world’s first outdoor planetarium. Famed comet hunter Carolyn Spellman Shoemaker, widow of the great planetary scientist Eugene Shoemaker, hails from the Chico area. She was on hand to dedicate the planetarium at its inauguration in November 2006.

“I think this is a wonderful idea, and I am really honored,” said Shoemaker. “Gene would have been thrilled as well. This is a great way of getting people to appreciate the beauty of the night sky, which is something that we both shared.”

The modest, concrete facility adjoining the observatory accommodates more than forty stargazers for tours of the constellations: mythology, general science and astronomical history. Hand-held multimedia devices deliver a live

feed from the observatory’s telescopes using wi-fi to the planetarium’s guests.

“We get 100 guests at a time during our normal operating hours and more than 500 during special events,” says Koenig. “So we started doing constellation tours outside with green laser pointers to reduce the crowds around the telescopes. These are extremely popular, but I thought we could do better than standing by the porta-potty and pointing out the Big Dipper and the Summer Triangle.”

The \$50,000 project took four years of planning, public review, and construction. Koenig raised money from businesses and individual donors in the community, and a local contractor offered his construction services at a discount. The result is a concrete bowl 32 feet (93/4 meters) in diameter — it resembles a crater with its raised rim — surrounding a central area where the docents (called “star masters”) conduct their stellar programs.

On this October’s calendar was “A Night with Galileo”, a tribute to the great Italian astronomer in celebration of the International Year of Astronomy. Kris Koenig portrays the legendary figure, complete with period costume and a replica of Galileo’s original telescope. The event drew scores from the local community and benefitted a local charity.

Nestled far from city lights, in Chico’s historic Bidwell Park, KCCO is operated entirely by volunteers, bringing the night sky to local children and adults four nights a week. The observatory relies entirely on the largesse of donors, including support from the Greater Chico Kiwanians. Messier Object plaques on the observatory’s can be sponsored for donations of \$500 dollars or more.

“Bidwell Park has many wonderful trails, so we like to think of the observatory as just another of its trailheads,” says Koenig. “But this one leads to the universe.”

Visit www.chicoobservatory.com for more about KCCO.

Astronomy Club Profile

Japan: Ryukyu Astronomy Club

Founded in 2002, the Ryukyu Astronomy Club (RAC) enjoys subtropical weather and views of more southerly objects from their vantage point of 26 degrees north



Okinawa Boy Scouts are treated to stargazing with the RAC’s telescopes. Photo credit: Ryukyu Astronomy Club

latitude. The Okinawa club’s members are convenient to two observatories: Ishigaki’s 105 cm Ritchey-Chretien and Hateruma’s 200 mm Nishimura refractor.

This year the club has sponsored a number of public activities, including a visit from local Boy Scouts in June. The youngsters were introduced to a number of astronomy topics, including star colors, constellations, sky motion and optical designs. After the presentation, several small telescopes were set up outdoors so that the scouts could observe the Moon and nearby Saturn in the Leo constellation.

Regular club meetings are held on the fourth Saturday of each month. A presentation or video and discussion follows a brief attention to club business. Weather permitting, members retire to the outdoors for stargazing.

Visit the RAC website [here](#).

400 YEARS *of the* TELESCOPE

IYA USA continued from page 1

led by Andrew Fraknoi (of Foothill College & the ASP) and Dennis Schatz (of Seattle's Pacific Science Center). Other presenters included Connie Walker and Robert Sparks (National Optical Astronomy Observatories) and Suzy Gurton (ASP).

More info: <http://www.gttusa.org/>

Galileo Teacher's Workshop in Hawaii

Educators from across the Big Island attended the recent Galileo Teacher's Workshop in celebration of the International Year of Astronomy. Teachers were given a Galileoscope to build and take back to their classroom. The Galileoscope is a cornerstone project for IYA, which honors the 400 years of telescope's advancement in astronomy. The workshop was sponsored by Gemini Observatory, TMT (Thirty Meter Telescope), Big Island Toyota and NELHA.

For more information regarding future workshops, contact Janice Harvey at jharvey@gemini.edu or visit <http://www.hawaii.tribune-herald.com/somk/>.

FETTU Forum for Organizers

We've set up a blog page that we hope will serve as a forum for FETTU organizers -- and those who wish to become FETTU organizers -- can communicate with one another. The idea is that this blog will allow people who are done with their FETTU materials to share with those who may like to use them. Please see:

<http://www.fromearthtotheuniverse.org/blog/main.php>

FETTU Braille Exhibit

As part of the "From Earth to the Universe" (FETTU) project, a NASA-funded tactile and Braille exhibit for the visually impaired community was launched in July 2009. FETTU panels for the visually impaired were produced featuring tactile displays as well as Braille versions of the caption material for a subset of the FETTU images with materials based on the book "Touch the Invisible Sky". The tactile exhibit is cur-

rently at the Atlanta Center for the Visually Impaired (Atlanta, Georgia), the Perkins School for the Blind (Boston, Massachusetts) and Columbia University (New York, New York) and will move on to additional locations this fall in Maryland, Arkansas, and Puerto Rico. For more information on the tactile display, visit <http://www.fromearthtotheuniverse.org/tactile.php>



NASA's Multiwavelength Image Unveiling

NASA's Great Observatories - the Hubble Space Telescope, Spitzer Space Telescope, and Chandra X-ray Observatory - will release a new multiwavelength image to celebrate the culmination of the International Year of Astronomy. 152 institutions will unveil prints of the Hubble-Spitzer-Chandra view of the core of our Milky Way Galaxy in local events to be held between November 10 and November 30, 2009. High-resolution files will be available after November 10 for institutions that would like to create their own prints.

Visit <http://hubblesource.stsci.edu/events/iyafinale/> for more information.

Doug Isbell's Book

Congratulations to Doug Isbell on the publication of his book, *Observatories of the Southwest: A Guide for Curious Skywatchers*. It is available on Amazon here:

http://www.amazon.com/s/ref=nb_ss?url=search-

[alias%3Dstripbooks&field-keywords=Observatories+of+the+Southwest%3A+A+Guide+for+Curious+Skywatchers+&x=6&y=12](#)

IYA at CAP2010 in S. Africa - Call for Registration

The "Communicating Astronomy with the Public 2010" (CAP2010) conference will take place in Cape Town, South Africa, from 15 to 19 March, 2010. Following the previous conferences in this series, it aims to address the modern challenges in astronomy communication through a global perspective. Major themes of CAP2010 will be the outcome and legacy of the International Year of Astronomy 2009 (IYA2009) as well as techniques for how to make public astronomical knowledge global and accessible to everyone across national, language, political, social and cultural borders and to those with impairment limitations.

<http://www.astronomy2009.org/news/updates/472/>

First UNAW Program in the United States: Discovering My Universe

"Discovering My Universe" is a Riverside County Library System program for a network comprised of 33 library branches and museum located in southern California. The program is designed to provide outreach to the immediate community of three million in the county area, over 40% of which are Hispanic, and to the broader community in southern California and beyond.

The program introduces young children to their universe via a series of monthly library based pre-school and primary grade bilingual storytimes and related crafts during the International Year of Astronomy 2009 along with celebrating a special day of astronomy on or near October 24, 2009, in conjunction with the Astronomical League Fall IYA2009 activities. In subsequent years, the project will coordinate special library based storytimes on or near International Astronomy Day.

The project will also add free downloadable Astronomy related storytime reading

[Continued on page 11](#)

400 YEARS *of the* TELESCOPE

Road trips continued from page 1

erate two Hyperstar equipped 11-inch telescopes donated by Celestron for the event.

The original invitation was extended to four of us: Anita Ingrao, associate producer of *400 Years of the Telescope* and co-director of the Chico Community Observatory; Dean Koenig, inventor of the Hyperstar lens sys-



President Obama checks out the heavens at the White House Star Party.

tem; Heidi Koenig, a high school volunteer to assist NASA facilitating the event; and yours truly.

The initial plans were to operate the Hyperstar telescopes to display live video of astronomical objects down to the 14th magnitude and, in case of rain, show a 20-minute highlight version of *400 Years of the Telescope*, along with a series of hands-on NASA displays that were to be manned by high school students. We also suggested to NASA that the Astronomical Society of the Pacific/NASA Night Sky Network include the *400 Years of the Telescope* tool kit in the hands-on activities.

Our grand travel scheme foresaw our team of four flying to Washington, DC, the day before the event, participate in the star party and depart the next day. I would then travel onto the Pariscience Film Festival with Heidi where we would meet up with

Donald Goldsmith. *400 Years of the Telescope* had already been selected to participate as a grand jury finalist at this prestigious festival where the French dubbed version of the film premiere.

“The best laid plans of mice and men” then come into play. Two weeks after the initial invitation, the White House film showing was cut from the schedule and we were reduced to a team of two. A decision had to be made – who would go to the White House and who would go to Paris?

The decision was, in fact, simple: Dean and Anita would represent our team at the White House, as they are both experts operating the Hyperstar system. Anita operates one such system four nights a week at the Chico Community Observatory. Heidi and I would fly direct to France and attend Pariscience.

The White Event – in Anita’s words:

The President and First Lady hosted a Star Party at the White House for middle-school students, highlighting the President’s commitment to science, engineering and math education, and inspiring the next generation by showing them the beauty and mysteries of the night sky.

Dean Koenig, owner of Starizona, a telescope store in Tucson, Arizona, (also, big brother to Kris) and I were invited to set up two 11-inch Celestron telescopes equipped with Dean’s customized Hyperstar lenses and cameras. These deep-sky cameras captured fabulous color images of the Dumbell nebula, the Ring nebula, the Andromeda Galaxy, the Lagoon nebula and other marvelous objects through the light pollution of the White House lawn.

The kids loved it, and so did the adults. Many of the White House staff and interns were hovering over the display, asking questions and enjoying their time at our station. Dean allowed one lucky student to “take” a picture with the set-up, and that young man’s grin was as bright as the moon!

As always, I had a lovely time chatting with the children and sharing views of the moon, various globular clusters, and working with Dean. If you are ever in Tucson, Arizona,

stop by his store and ask to see some of the terrific cosmic images he’s grabbed with his latest camera, the Hyperstar 3.

Pariscience – in Kris’s words:

By far, the Pariscience was the best film festival we have attended all year. The international science film festival, organized by the Association Science & Television (AST) French science producers, at Museum national d’Histoire naturelle, Jardin des Plantes in Paris was well-produced and attended. Forty films presenting an array of scientific subjects were presented to several thousand science and documentary enthusiasts over five days.

The venue was superb and the French hospitality warm. We had about 125 – 140 attendees at our screening followed by a lively Q&A session led by Catherine Cesarsky and myself. In fact, interest was so high that we had to take the session outside when we ran past our allotted time.

Although *400 Years of the Telescope* did not take home a prize from Pariscience, it was a great honor to attend the festival, representing one of only forty films selected out of six hundred submitted — a testament to the exceptional craftsmanship by our team of over 200 who labored on *400 Years of the Telescope*.

In closing, I would like to take this opportunity to thank Ball Aerospace, Celestron and Catherine Cesarsky for helping us with these events; and to Franck Marchis and Donald Goldsmith for working on the French translation of the script.

IYA USA continued from page 9

selections and craft templates on the Riverside County Library System website for educators or the general public to access, along with increasing the number of links to children friendly Astronomy sites on the Riverside County Library System Web site. For more information, see: <http://bit.ly/FaDhU>

“Out of this World: The Landscapes of Our Solar System” in Moraga, CA

You are invited to the Grand Opening of “Out of this World: The Landscapes of Our Solar System” a new art exhibition at the Hearst Gallery October 11 - December 13.

The exhibit features the paintings of some of the best known artists, depicting scenes of alien worlds. There will also be computer simulations, a scale model of the Mars Rover, films, Hubble, Mars Rover, and Cassini planetary images, and more. The curators of this special show are Carrie Brewster, the Gallery Director, and Ronald Olowin, Professor of Physics and Astronomy at St. Mary's. For information and directions, see: <http://www.hearstartgallery.org>

Cultural Astronomy Working Group

Celestial Cinema: Hubble's Diverse Universe will be shown during the Women in Astronomy Conference in October, at Goddard Space Flight Center in November, and at Space Telescope in November. In 2010 it will be shown at AAS Jan and NSBP Feb. We plan to release DVD copies in 2010. If you want to schedule local showings in November and December get in touch with Jarita.

Skies Alive film Competition: There are several categories of film that will be accepted. There is a submission fee but the project also needs about \$1000.00. Film submission will be accepted through Nov 15th. Please circulate to potential filmmakers. Also, volunteers are needed, contact Elizabeth Wallace (efwallace@aol.com) if you are interested or if you would like promotional materials. <http://ursa.as.arizona.edu/~iya2009cast/SkiesAlive.htm>

Cultural Astronomy Lectures: We have cre-

ated an “Events” page in which we want to post upcoming cultural astronomy and storytelling lectures from all over the United States. Right now there are listed two lectures:

<http://ursa.as.arizona.edu/~iya2009cast/Events.htm> and <http://ursa.as.arizona.edu/~iya2009cast/opportunities.htm>

News from Puerto Rico

We had 483 students and teachers visit the poster areas and exhibits at the Division of Planetary Sciences Conference on Monday, October 5, 2009. The scientists talked with the students and gave them 30 minute talks. We have the Galileoscope on display and expect more students on Wednesday. This link is an article prepared by the IYA student volunteers (Starry Messengers):

<http://dialogodigital.com/en/node/2921>

News from Canada

Q2CFestival.com will take a global audience from the strange subatomic world to the outer frontiers of the universe with the help of an international roster of 60+ cutting-edge scientists, writers, and thinkers. Perimeter Institute's ‘Quantum to Cosmos: Ideas for the Future’ festival, launching October 15, 2009, will provide one of the world's most interesting online destinations during this International Year of Astronomy. The event will also commemorate the 10th anniversary of Perimeter Institute's creation and contribute to Canada's National Science and Technology Week activities. Join them online at www.Q2CFestival.com

FETTU Opening in Iranian Parliament

“From Earth To The Universe” astronomy photo exhibition in Parliament of Iran inaugurated by Professor Yousef Sobuti, father of modern astronomy in Iran on September 27, 2009. FETTU and a selection of astro-photos of the sky of Iran photo exhibition inaugurated in the presence of Ali Larijani, chairman of Iranian Parliament, members of the Parliament and Iranian professional astronomers.

FETTU exhibition in Parliament of Iran

is the only one of its kind in Iran. It is a selection of thirty telescopic images of celestial objects and twenty photos of glory of the night sky above Iran's historical and cultural symbols. Report by Irene Shivaei

IYA International News from SPOC Updates

Wanted: your IYA2009 photographs!

IYA2009 is a great opportunity to take amazing pictures of the night sky, star parties, exhibitions, school activities, talks, and other events. The IYA2009 Secretariat invites you all to submit your pictures to be used in products such as like press releases, brochures, and the final report. Find out how to do this here: <http://www.astronomy2009.org/news/updates/465/>

Astronomy study abroad – Ghana

In celebration of IYA2009, the University of Arizona's Office of Study Abroad & Student Exchange is offering a unique faculty-led winter session program in Ghana. This program is designed for students interested in astronomy and anthropology, particularly in an African context. See more details: <http://www.astronomy2009.org/news/updates/466/>

Upcoming IYA Presentations at National Conferences

AGU - Steve Pompea and Doug Isbell (as invited speaker) Dec 14-18, 2009 in San Francisco.

Please let Andrea and Kristina know when you will be giving IYA presentations at national conferences. Afterwards, please tell us approximately how many people were in the audience.

If you have any other IYA news or publicity to report, please let us know!

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365 Days of Astronomy Podcast Wins Prestigious Parsec Award

By Doug Isbell

The 365 Days of Astronomy Podcast, an official podcast of the International Year of Astronomy 2009 (IYA2009), won the prestigious [Parsec Award for Best Infotainment Podcast](#) on September 5. This community-produced podcast brings together the voices of astronomers and astronomy lovers all around the world. Each day a different voice discusses their favorite corner of astronomy. The show can be found at 365DaysofAstronomy.org

The 365 Days of Astronomy (365 DoA) podcast is unique in how it brings together listener-created content to produce each daily show. "365 Days of Astronomy is a testament to the passion and knowledge that many people have about astronomy and space exploration," says 365 DoA team member Davin Flateau. "The daily podcasts are produced not only by scientists and educators, but also by many people who just want to share their excitement about the Universe. Listening to such diverse perspectives on my computer and music player continues to be a daily treat."

Contributors to 365 DoA include Diane Duane (author of the Middle Kingdoms series), Brother Guy Consolmangno (Vatican Observatory), Dr. Ed Stone (JPL, Voyager mission), and Dr. Chris Lintott (Sky at Night and Galaxy Zoo). The show has also featured interviews with Michael Turner (Nobel laureate), Tim Russ (Tuvok from Star Trek), and Robert Zubrin (Mars Direct).

"365 Days of Astronomy is undeniably the most ambitious and successful daily user-contributed podcast in history," says Michael Koppelman. "It really speaks volumes to the enthusiasm that people have for science and astronomy." Koppelman, along with Dr. Pamela Gay, are co-chairs of the IYA2009 New Media Task Group and are part of the 365 DoA production team.

The 365 DoA podcast has strived to be international in what it presents. "The 365 Days of Astronomy podcast has given the global astronomical community a voice," says British team member Rob Simpson. "In response they have shown themselves to be creative, insightful and entertaining; providing us daily with novel and interesting tales on a wide range of topics. It has really shown how online media can provide a whole new way of listening and participating, and can break down barriers in lots of ways."

The Parsec Award itself is an international award, with recipients coming from all around the globe. The 365 DoA team received their Parsec Award at the Dragon*Con convention in Atlanta. The award was accepted by George Hrab, composer of the show's theme song. (The 365 DoA theme song, "Far," can be found at <http://www.youtube.com/watch?v=dF2HG1PVZok>.) The 365 DoA podcast was one of five finalists for this award, with 50 shows receiving nominations.

"Although it is just three years old, the Parsec Awards have quickly become one of the most recognizable honors in science and fiction podcasting," said Gay. "To have our community production receive this award was an amazing experience. This is everyone's award."

Key contributors include Nancy Atkinson, Georgia Bracey, Davin Flateau, Kortney Hogan, Michael Koppelman, Emily Lakdawalla, Stuart Lowe, Martin Ratcliffe, and Robert Simpson. The 365 Days of Astronomy Podcast is produced by the New Media Working Group of the International Year of Astronomy 2009 at Southern Illinois University Edwardsville, with audio post-production by Preston Gibson. Bandwidth is donated by libsyn.com and Wizard Media. Web design is by Clockwork Active Media Systems. Podcasts maybe reproduced and distributed for non-commercial purposes.

About the US IYA2009 Logo

US IYA2009 has created a logo specifically for national events and activities. (Please use the international logo for programs related to the major IYA cornerstone projects or other international ventures.) Please [contact](#) the US IYA program for permission for use. The US IYA project has also created a [giant postcard](#) (2.8 MB PDF) that summarizes the major themes and programs that are being developed.

400 Years *of the* Telescope

A Journey of Science, Technology & Thought

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Please click [here](#) to subscribe.