



# 400 YEARS *of the* TELESCOPE

A JOURNEY OF SCIENCE, TECHNOLOGY AND THOUGHT

## Production Update 400 Years of the Telescope welcomes Neil deGrasse Tyson as narrator

Astrophysicist and public educator Neil deGrasse Tyson, PhD, Director of the Hayden Planetarium at the American Museum of Natural History in New York City, will narrate the upcoming public television documentary *400 Years of the Telescope: A Journey of Science, Technology and Thought*, scheduled for broadcast in January 2009. Tyson will serve as a member of the advisory board. He is a familiar face on PBS as the host of NOVA Science Now and several NOVA programs, including Origins, and a frequent guest on national talk-shows and news programs. Last year Tyson was named in Time Magazine's "Time 100" list as one of the 100 most influential people in the world.

The 400 Years of the Telescope project partners are very pleased to welcome Dr. Tyson



as narrator of the program. Tyson's voice will add to the scientific and historic authority of the production, and his role as "America's Scientist" will encourage the public to view the documentary.

Neil deGrasse Tyson was born and raised in New York City where he was educated in the public schools through his graduation from the Bronx High School of Science. Tyson went on to earn his BA in Physics from Harvard and his PhD in Astrophysics from Columbia.

Tyson's professional research interests are [Continued on page 7](#)

## Celebrating 90 years of observational astronomy at the Dominion Astrophysical Observatory



telescope on Little Saanich Mountain (now officially Observatory Hill) just north of the city of Victoria, British Columbia. The telescope, briefly the largest operating telescope in the world, was the result of John Stanley Plaskett's efforts to convince the Canadian government to provide funding for a major facility to replace the primary astronomical research instrument in Canada at the time, the modest 0.38m (15") refracting telescope at the Dominion Observatory in Ottawa. He envisioned a facility capable of doing frontier astrophysics through spectroscopy, rather than positional and time keeping astronomy.

The new Dominion Astrophysical Observatory's (DAO) telescope was equipped with (for [Continued on page 4](#)

## IYA Update

### Organisational Matters

New Single Point of Contacts: The IYA2009 is growing; presently we have 110 National Nodes (55 of which have National dedicated web site) and 19 Organisational Nodes. A warm welcome to Bahrain and to the EAAE - European



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## The Instituto Nacional de Astrofísica, Óptica y Electrónica Prepares for the IYA 2009

By Alberto Carraminana, *INAOE*

The Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE), located in the small town Tonantzintla, in the suburbs of the relatively large city of Puebla, is planning for the IYA2009. During the second half of 2007 INAOE organized four astronomical evenings: August 2007 four hundred people got together in Tonantzintla where fifty telescopes were prepared for the star party; October 2007 ten telescopes were taken to Tlaxcala where seven hundred persons showed up for the stellar show; the same month, during the national week of science five hundred participants enjoyed the stars at the INAOE facilities; and in December 2007 INAOE organized a similar show in the beautiful city of Oaxaca. Aside from the star parties, INAOE is seeking local companies interested in constructing the Galileo-scope for the

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## Mexico prepares to celebrate the International Year of Astronomy

Silvia Torres-Peimbert

*Instituto de Astronomía, Universidad Nacional Autónoma de México*

Our country has a population of 110 million inhabitants and the number of professional astronomers is very limited, with only about 140.



Furthermore, the number of amateur astronomers, and the number of telescopes, although they have been increasing in recent years, is very limited.

Therefore we have a great challenge ahead of us. Nevertheless we are going forward organizing many IYA2009 activities. Most of these activities are planned for Mexico City, but some of them can be extended to other areas.

As in the rest of the world, there are several key projects that we plan to develop during 2009:

- To celebrate Galileo and the breakthroughs he achieved
- To display the influence that astronomy has had in science, culture and society
- To strengthen a scientific perspective in society
- To show that astronomy is very exciting
- To explain that in Mexico there is also astronomical research being carried out

- To expose as many people as possible to observe the sky
- To help protect the night sky from light pollution
- To try to recover some of the pre-Columbian views of the world

To accomplish our goals, we must attract the attention of the media to these activities. To this end, we have organized a group of activities. They fall into different categories and each one is in various stages of development.

**Inaugural event:** Although our plans are not final, we will possibly initiate the International Year of Astronomy with a set of “star parties” to take place simultaneously at several archeological sites, as well as a formal ceremony with our local authorities in Mexico City. The possible sites and dates are still under consideration. We expect that this activity will catch the attention of the public.

**Astronomy Fair:** To close the celebrations in Mexico City there will be an astronomy fair at a University location. The fair will include astronomical image exhibits, public talks, children activities, astronomical videos, portable planetary, telescope stands and displays of the winners of the photography and art contests. This exhibit will be well attended since there is keen interest among the young students to learn more about astronomy.



In addition we have a set of assorted outreach activities that are being organized, many of them to be carried out throughout the year 2009.

**Publications:** Several books directed to young readers and teachers have been written in preparation for 2009 and are in the printing

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## Featured Observatory

### The Cuxpala Observatory, University of Guadalajara

The University of Guadalajara is one of the most prestigious universities in Latin America and its Astronomy group is located in the Instituto de Astronomía y Meteorología, in a pleasant location with gardens in the west of the city. The Instituto was founded in 1926 by Father Severo Diaz, and since then has supplied the media and citizens of Guadalajara with information about astronomical events and daily weather forecasts. Since 1997 there has been a stronger impulse towards forming new research groups in the Physics Department, and the Astronomy group has been fortified by the hiring of five researchers, Peter Phillips, Simon Kemp, Luis Corral, Silvana Navarro and, this year, Eduardo de la Fuente.

The areas of research interests include a strong program on planetary nebulae, and studies of the structure of galaxies, groups and clusters of galaxies, luminous blue variables and hot stars, and compact regions of star formation. We regularly publish in international journals and present results at international conferences. We have graduated two PhD students in 2007 and three MSc students in 2006-2007, and about a dozen undergraduate students have written their Bachelors thesis on an astronomical topic.



We have held four astronomical conferences in Guadalajara during the last 7 years; three regional meetings, also including the professional astronomers in the University of Guanajuato and the Centro de Radioastronomía y Astrofísica in Morelia, the most recent of which took place in November 2007, and the annual National Astronomy Conference in 2002. We have been awarded the latter again for 2010.

Researchers and students of the group regularly carry out observations at the Observatorio Astronómico Nacional in the mountains at San Pedro Martir, Baja California, on the 2.1 and 1.5m telescopes. We also have a small observatory at Cuxpala, an hour outside the city, in which a telescope of 62cm is being installed, while the site is currently used for student classes with a 30cm Schmidt-Cassegrain telescope, due to its relatively dark sky.

Plans to celebrate the International Year of Astronomy in 2009 include more outreach talks to the public and to schools, more classes and visits to the Observatory at Cuxpala and of course the planning of the National Astronomy Conference in Guadalajara for early in 2010.

Contact:

Dr John Peter Phillips  
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## INAOE *continued from page 1*

region.

INAOE has been holding yearly educational and outreach activities, including science workshops for schoolteachers and youngsters. For the IYA2009 we are planning to create a network of teachers interested in astronomy that will extend the effort of communicating astronomy. This effort is in parallel with the 2009 FILEC, Feria Internacional de Lectura, visited at Tonantzintla by some twenty thousand between the 14 and 17 of February 2008. The 2009 version will be devoted to IYA.

Since 2005 INAOE has been organizing the *Olimpiada de Astronomía* (Mexican Astronomy Olympics), which will be extended to Central America and the Caribbean in 2008 and to the whole of Latin America for IYA2009.

Last, but not least, researchers from INAOE are promoting the

exhibit *El Universo para que lo Descubras*, a joint initiative of INAOE with the Instituto Astrofísico de Andalucía. This exhibit, considered within the plans of the International Astronomical Union, is made of fifty astronomical images selected by their content and with extremely large resolution, such that they can be printed in large formats. These images will be accompanied with a title, a reference scale indicating size and distance and an explanation, together with a quotation from the literature. The images are divided in four large themes: Solar system, stars and the interstellar medium; galaxies; and the structure of the Universe.

The purpose of the exhibit is to have these images on display in public spaces within cities and towns of Mexico and Spain. A kit will be produced and presented to local authorities of different towns and cities, together with potential sponsors.

Contact Alberto Carraminana at [alberto@inaoep.mx](mailto:alberto@inaoep.mx) for more information.

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## *Dominion* continued from page 1

the time) an efficient spectrograph which Plaskett and his staff of two astronomers and an observing assistant used to begin an extensive program to measure radial velocities (the speeds along the line-of-sight) of hundreds of hot, massive stars. These were used to compute orbits and determine masses for hundreds of binary stars, confirm theories about the rotation of the Milky Way galaxy and measure the galaxy's size, mass, rotation period and the location of the sun within it, and establish general acceptance of the existence of the rarefied interstellar medium between the stars.



*John Stanley Plaskett stands in front of the telescope pier while R. K. Young is on the elevating observing platform to access the Newtonian focus. Photo 1919, courtesy NRC-HIA.*

The 1.83m telescope quickly enabled Canadian astronomy to achieve worldwide recognition and made Victoria the focal point of Canadian astronomical research until 1935 when the 1.88m (74") telescope of the David Dunlap Observatory at the University of Toronto was completed. The latter was the first of many telescopes built until the 1960's patterned upon Plaskett's design for the DAO 1.83m telescope.

Studies of stellar astrophysics and the interstellar medium dominated the research carried out in the first 50 years of the DAO and the desire for still higher spectral resolution culminated in the construction and first light of the DAO 1.2m (48") telescope and high-resolution coude spectrograph in March 1962. Until late in the 1970's both telescopes were used much of the time by resident staff which made it possible to develop programs that required large amounts of observing time extending over years. Today the telescopes are operated as national facilities open to all qualified researchers through a peer-review process. They are scheduled quarterly and continue to welcome long-term and thesis projects.

Upgrades to the telescopes over the last several decades have included the installation of a new all-reflective Cassegrain spectrograph in 1967, a new low-expansion Cervit 1.83m primary mirror in 1974, a photoelectric radial-velocity scanner for the 1.2m telescope in 1982, the addition of a modified f/5 Newtonian secondary to permit imaging programs on the 1.83m telescope in 1991 and new encoders and computerized control systems on both telescopes. The National Research Council of Canada's Herzberg Institute of Astrophysics' (NRC-HIA) current world-renowned

expertise in astronomical instrument development owes much of its heritage to such development for the DAO telescopes. These facilities still act as test beds for novel instrument and technology development by NRC-HIA staff.



*The elevating observing platform on the dome shutter was removed to enable the telescope to be used safely under computer control. While the latter greatly improved pointing accuracy and observing efficiency, it involved replacing the mechanically ingenious and beautiful gravity drive that had operated flawlessly for more than 70 years with stepper motors and encoders, some of which are visible in the colour image. Operational safety was also greatly improved both because observers no longer need to use of the tall ladders to access the eyepiece for manual guiding, and the software protects against crashing into the pier. The historic UT and Sidereal clocks in the 1919 image are now on display in our visitor centre, The Centre of the Universe, where with other examples they comprise one of the largest, most valuable collections of historic clocks in Canada. The black covering on the tube today mitigates against stray light in the era of CCD imaging and spectroscopy. Principles and experiences gained in designing and operating the ultra-stable Cassegrain spectrograph have been successfully carried into instruments designed and built by the Observatory for the Canada-France-Hawaii and Gemini Observatories.*

Today competition for observing time on both DAO telescopes continues to exceed the number of nights available. This is largely a result of the continued efforts by a small number of dedicated NRC-HIA staff members to enhance the observing capabilities of both telescopes. Improvements made to the venerable 1.83m over the last few years have included commissioning of a larger 2048 × 4096 pixel CCD camera at the Newtonian imaging focus, high-reflectivity coatings on the secondary and spectrograph mirrors, upgrades to the observing control system, installation of much more sensitive acquisition and guide cameras at both telescope foci and the development of a new polarimeter module for the Cassegrain spectrograph. Spectra can now be obtained of

objects 10,000 times fainter than was possible in Plaskett's time. Development efforts for the 1.2m telescope have been focused on the implementation of fully automated observing capabilities for the telescope. This has been so successful that 50% of the observing time scheduled on this telescope has been performed in an automated fashion in recent observing quarters.

While observers on both telescopes continue to carry out the 90-

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## 400 Years of the Telescope welcomes composer Mark Slater

Mark Slater was born in Reigate, England into a musical family. His father, Christopher Slater, a professional conductor and organist, was a professor at Royal College of Music in London. Mark

started playing the cello and piano at the age of five. His early musical gifts earned him a scholarship as a chorister in Christ Church Cathedral, Oxford, followed by a scholarship to one of the oldest schools in the UK, Oakham School. After Oakham School he studied composition at London College of Music and techniques for composing for film at the Ealing Studios (1998), and studied with Nick Ingman and Rodney Newton.

Mark had his debut as concert pianist in 1998 at the Dorking Halls performing *Rhapsody on a Theme of Paganini* by Sergei Rachmaninoff. He has worked on several films, documentaries, plays, and concert commissions over the last several years since 1998, including *Flatland the Film* (2007, Flatland Productions Inc., Ladd Ehlinger). He worked briefly with David Arnold on *The Musketeer* (2001). In 2007 he composed music for the Philips Aurea website. It was recorded at Abbey Road Studios with members of the London Symphony Orchestra. In 2005 Mark competed and was a runner up in the Gary Garritan Competition.

Mark is looking forward to composing the music for the 400 Years of the Telescope production. Astrophysics is one of his favorite topics and, having studied engineering at university, he appreciates the achievements in this field over the past 400 years. He will be composing in his own facility, and visiting one of the major studios in London to record with some of the UK's premier musicians, and then finally at a dubbing session in the US.

*Mark Andrew Slater (born April 1, 1969) is a British film composer, conductor, cellist and pianist. <http://www.markslater.net>*

## IYA Dark Skies Cornerstone Project The world turns out for World Wildlife Fund's Earth Hour

Over 400 cities participate in historic global event to turn off lights and support action on climate change

By Meg Pearce, *World Wildlife Fund*

Millions of people in cities across the U.S. and around the globe turned their lights off for one hour on Saturday, March 29, 2008 to make an unprecedented and highly visible global statement in support for action on climate change.

The World Wildlife Fund (WWF), the world's largest conservation organization, which organized and coordinated the inaugural global event, reports that an estimated 36 million Americans took part in Earth Hour. According to a survey by Zogby International, approximately 16 percent of the U.S. adult population reported taking part in Earth Hour and 78 percent were aware of the event, which took place globally in more than 400 cities in 35 countries across all seven continents. During the week lead-

ing up to the event, there were more than 6.2 million unique visitors to the [www.EarthHourUS.org](http://www.EarthHourUS.org) website.

"Earth Hour provided millions of Americans with a way to demonstrate their commitment to combating climate change," said Carter Roberts, President and CEO of World Wildlife Fund. "This strong public support for Earth Hour should serve as a call to action to governments around the world that it is time to take serious steps to reduce energy consumption and global CO2 emissions."

Beyond the four official US flagship cities of Atlanta, Chicago, Phoenix and San Francisco, WWF estimates that more than 100 cities and towns across the nation took part in the event, including Miami, Denver, Honolulu, Charlotte, Minneapolis, Pittsburgh and St. Louis and many others. Iconic landmarks in the US going dark included the Golden Gate Bridge, Sears Tower, Empire State Building, Coca-Cola billboard in Times Square, Bank of America Plaza (Atlanta), US Airways Arena (Phoenix), Alcatraz and others turned off their lights to symbolize the need to take action on climate change.

"Climate change is the most urgent environmental issue facing our planet today,"

said WWF's Carter Roberts. "To achieve the greenhouse gas reductions necessary to slow the effects of climate change, it will take a concerted effort from all levels of society—including individuals, businesses, and governments throughout the world. Earth Hour inspires people all around the world to show their commitment and concern."



World Wildlife Fund is already gearing up to bring even more people, cities, and organizations for next year's Earth Hour on March 28, 2009 from 8:30-9:30 pm.

More information about Earth Hour can be found at [www.EarthHour.org](http://www.EarthHour.org).

Have questions? Contact Earth Hour at <http://www.earthhour.org/contact>

For further information on Dark Skies Cornerstone Project events during the International Year of Astronomy 2009, visit <http://astronomy2009.us/darkskies/> for U.S.-based activities and <http://www.darkskiesawareness.org> for internationally-based activities.

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Association for Astronomy Education. More to come in the following weeks!

**New IYA2009 Task Groups:** Two new IYA2009 Task Groups were established to support the IYA2009 programme:

**Philately:** This Special Task Group will create and maintain a global philatelic checklist of postal authority releases generated in celebration of the IYA2009 and/or astronomy in general. Co-chairs: Michael Howell (mhowell@mail.accd.edu) & John Budd (jwgbudd@earthlink.net)

**Evaluation:** IYA2009 is an excellent opportunity to increase public understanding and awareness of astronomy. All over the world, people will work to bring the public all sorts of activities promoting science in general and astronomy in particular. But will they achieve their objectives? What lessons will we learn? Co-Chairs: Pedro Russo (prusso@eso.org) & Mariana Barrosa (mbarrosa@eso.org)

## Resources

**IYA2009 Trailer:** The IYA2009 Movie Trailer is now available in several formats. It is an exceptional resource that you can use for your own national communication, press communication, communication with lay-people, science centres and planetariums.

**IYA2009 Trailer in different formats:**

[http://www.astronomy2009.org/index.php/?option=com\\_content&view=article&id=378](http://www.astronomy2009.org/index.php/?option=com_content&view=article&id=378)

**PowerPoint presentation:** "Astronomy": What is Astronomy? What does Astronomy study? Why do we need Astronomy? Find out the answers to these questions and more in the Power Point presentation that we prepared for you: <http://www.astronomy2009.org/resources-mainmenu-47/power-point-mainmenu-97.html>

**New IYA2009 Brochure**

We are polishing the new IYA2009 Brochure. This brochure is much more than a simple popularisation product; it is also a

unique resource for your own internal communication, press communication, communication with lay-people, project definition and fund-raising, etc.

## IYA2009 Meetings

### NAM2008

This year the UK's National Astronomical Meeting had a session dedicated to Education and Public Outreach in astronomy and space science, both within the UK and overseas, in the run-up to International Year of Astronomy in 2009. The authors and abstracts of the talks may be found on: <http://nam2008.qub.ac.uk/abstracts/P29.shtml>

### MEARIM2008

The MEARIM2008 session dedicated to IYA2009 programme, with special emphasis on Middle East and Africa, was a success. Several countries from the region reported about their plans, ideas and projects for IYA2009. It was extremely useful discussing projects and hearing input, comments, and ideas from the community. The IYA2009 Developing Astronomy Globally Cornerstone Project will prepare a document with the necessary steps to establish a IYA2009 programme that can last beyond 2009. Thank you very much to all of you (or representatives) who participated in this fruitful meeting.

## Upcoming IYA2009 meetings

AAS 212th & ASP Meeting  
St. Louis, USA  
May 31-June 5, 2008

<http://www.astrosociety.org/events/meeting.html>

APRIM2008  
Kunming, China  
August 3-6, 2008  
<http://aprim.ynao.ac.cn/>

JENAM2008  
Wien, Austria  
September 8-12, 2008  
<http://www.univie.ac.at/jenam2008/>

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year tradition of radial velocity and interstellar medium studies at the DAO, recent observing programs include research by many NRC-HIA staff and visiting astronomers in such areas as comets and asteroids, variable stars, spectroscopy and polarimetry of peculiar stars, supernovae, post-asymptotic giant stars, globular clusters and active galactic nuclei. More than 40 papers, including 20 refereed manuscripts, based on data acquired with the telescopes were published in 2007.

The DAO telescopes clearly still serve an important and productive role in Canadian astronomy, and continue to provide the opportunity for astronomers to obtain large blocks of observing time for major surveys, long-term monitoring programs, and thesis projects. As was the case in Plaskett's day, the 1.83m telescope also still serves a very prominent role in public outreach activities. Recognizing that it is the centerpiece of the NRC-HIA's Centre of the Universe (CU) it is made available for very popular public tours until 23:00 five nights a week during the spring and summer months.

In 1993, the Canadian Astronomical Society (CASCA) commemorated the 75th anniversary of first light of the 1.83m telescope, officially renaming it the Plaskett Telescope. During 20-23 May 2008, the University of Victoria and NRC-HIA are again hosting CASCA's annual general meeting. Approximately 250 astronomers will attend the conference and many of these will enjoy the 90th anniversary of the 1.83m telescope during a special tour of the CU and the DAO at the conclusion of the meeting.

In 1975 in his review of the DAO from 1918-1975, K.O. Wright predicted "the Victoria telescopes will be useful for research purposes for twenty years or more." We have already exceeded these expectations by almost 15 years and the staff at NRC-HIA look forward to celebrating 100 years of original astronomical research with the Plaskett 1.83m telescope (and more than 50 with the 1.2m) in 2018!

David A. Bohlender  
NRC-HIA

## 400 Years of the Telescope welcomes editor Kimberly Generous White



Kimberly's passion for editing began in her Connecticut high school's television production department. She went on to earn a Bachelor of Fine Arts in Film and Animation Production from Rochester

Institute of Technology in upstate New York with a concentration in advanced Avid editing techniques. Since moving to Los Angeles, she has edited four independent feature films featuring talents such as Andy Griffith, Paul Sorvino, and Tony Curtis. In addition she has edited show content for various programs airing on PBS's NOVA, The History Channel, NBC, G4 and promotional material for FOX Searchlight.

As one of the youngest members of the Motion Picture Editor's Guild under the Picture Editor classification, she eagerly continues to work on a variety of new projects.

Kimberly's current project, the *400 Years of the Telescope* documentary, provides her with the opportunity to contribute her editing talents to a production that will be viewed both nationally and internationally in twelve foreign languages during the International Year of Astronomy 2009. With a personal interest in science, Kimberly is excited to be a part of the fast approaching 2009 global celebration of astronomy. Especially appealing to her is the opportunity to reach and inspire a new audience to take an interest in astronomy through the production. She believes that *400 Years of the Telescope* is a timely project, and that it is appropriate for humanity to pause and examine where they have come from with telescope technology, and also consider where they are going with advances in telescope technology.

Kimberly Generous White brings excellent editing skills, combined with a young, fresh approach to her work, and the production team is glad to have her aboard.

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broad, but include star formation, exploding stars, dwarf galaxies, and the structure of our Milky Way. In 2001, Tyson was appointed by President Bush to serve on a 12-member commission that studied the Future of the US Aerospace Industry. In 2004, Tyson was once again appointed by President Bush to serve on a 9-member commission on the Implementation of the United States Space Exploration Policy, dubbed the Moon, Mars, and Beyond commission. And in 2006, the head of NASA appointed Tyson to serve on its prestigious Advisory Council, which will help guide NASA through its perennial need to fit its ambitious vision into its restricted budget.

In addition to dozens of professional publications, Dr. Tyson has written, and continues to write for the public. He is a monthly essayist for *Natural History* magazine under the title *Universe*. And among Tyson's eight books is his memoir *The Sky is Not the Limit: Adventures of an Urban Astrophysicist*, and *Origins: Fourteen Billion Years of Cosmic Evolution*, co-written with *400 Years of the Telescope* writer, Donald Goldsmith. *Origins* is the companion book to the PBS-NOVA 4-part mini-series *Origins*, in which Tyson serves as on-camera host.

Tyson appears as the on-camera host of PBS-NOVA's spinoff program *NOVA ScienceNow*, which is an accessible look at the frontier of all the science that shapes the understanding of our place in the universe. Tyson's latest book is the playful and informative *Death By Black Hole and Other Cosmic Quandaries*, which was a New York Times bestseller.

Tyson is the recipient of nine honorary doctorates and the NASA Distinguished Public Service Medal. His contributions to the public appreciation of the cosmos have been recognized by the International Astronomical Union in their official naming of asteroid "13123 Tyson".

*Neil deGrasse Tyson is the first occupant of the Frederick P. Rose Directorship of the Hayden Planetarium. He lives in New York City with his wife and two children.*

<http://research.amnh.org/~tyson/>

## Planetarium News

The International Planetarium Society will hold its 19th conference in Chicago from 27 June to 2 July 2008 with the theme of Explore the Edge!

The conference will bring together more than 500 planetarium professionals from around the world to explore the newest technology and content for the dome environment. Astronomy education techniques and planetarium production are just some of the subjects to be covered at the conference. This year the keynote speaker is Dr. Edward Kolb of Fermilab. The conference venues are the Hyatt Regency McCormick Place and the historic Adler Planetarium.

A special session on *Astronomy of Indigenous Peoples* will discuss issues surrounding indigenous sky knowledge, including how it is recovered and preserved, and how indigenous groups would like

their astronomy history to be acknowledged. New and innovative public education that utilizes planetariums will be explored, along with methods to insure quality in planetarium programming. The IPS 2008 Conference will address issues related to identifying, developing, and implementing the practices that will enable the planetarium of tomorrow to strengthen its role as an important scientific and cultural medium. The finale to the conference will be a special banquet cruise aboard the Spirit of Chicago, which will showcase the magnificent Chicago skyline.

The *400 Years of the Telescope* team will be in attendance at the 19th IPS Conference, and they look forward to seeing you there! Visit [www.ips-planetarium.com](http://www.ips-planetarium.com) for more information.

Shawn Laatsch  
Planetarium Manager & IPS Treasurer  
Imiloa Astronomy Center of Hawaii  
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stage. Also there are a suite of local scientific journals where we have already secured space for dedicated astronomical issues.

**Webpage:** We have already set up our homepage (<http://www.astronomia2009.org.mx>) to promote our activities throughout the year. Among other items we will include book reviews for youngsters and schoolteachers on astronomy and Galileo.

**Radio capsules:** Our plan is to tape a set of 2 minute spots on astronomy to be aired daily during 2009. Some segments will describe interesting objects in each constellation.

**TV programs:** We are seeking to produce a set of 12 astronomy programs one-hour long, each one to be broadcast every month. This project is in its initial stages, and its completion is dependent upon securing funding.

**Public conferences:** In collaboration with the Mexican Academy of Science we will invite several distinguished foreign astronomers to deliver public talks throughout 2009 (with simultaneous translation). In addition, there will be a calendar of astronomical talks that will cover all topics. All will be webcast for extended viewing.

**Astronomical film festivals:** A series of astronomical films will be shown at various universities and cultural movie houses. A select few showings will be followed by an educator or astronomer-led discussion of the scientific issue under consideration.

**Contests:** (a) Astronomical photography with several themes of interest. The winner images will be displayed at the fair. (b) Science fiction stories. This is directed to youngsters. The winner stories will be published in the university science popularization journals. (c) Art. This is directed to children and youngsters. The winner pieces will be displayed at the fair.

**Star parties:** Several "astronomical nights" are planned with the collaboration of amateur astronomers.

**Astronomical exhibits:** We plan to pres-

ent the set of astronomical images, which are being collected by G. Tenorio-Tagle and E. Pérez. These are beautiful pictures, and will be displayed with the astronomical description of the object, and a related literary quote. The set of images will be printed in large format and displayed in city parks. This is quite possible in Mexico City, and will probably also take place in other cities in the country.

**Postal stamp and lottery ticket:** We are in the process of establishing contact with the corresponding authority to print out an astronomical theme.

Some of these planned IYA2009 activities form part of our existing outreach programs. However, the plan is to increase the intensity and scope of activities, as well as to diversify our programs.

In preparation for this outburst of 2009 activity, we have started to generate excitement and anticipation through our astronomical photography contest and a well-publicized star party during the February 20 lunar eclipse.

## Lunar eclipse – February 20, 2008

The setting was magnificent: the main square in Mexico City. Astronomical institutions, museums and amateur astronomers joined forces to prepare for this event. One hundred telescopes were set up, each one with two expert observers to show a long queue of people the sights through their instrument. Although the lines were long, those in the queue were patient, and were entertained by hosts, who were mingled with the crowd and sharing sky observations, while handing out a leaflet with information about the eclipse and the constellations.

Earlier in the afternoon, a public conference on Galileo was delivered and a group of artists performed on the band stand. There were large screens for the people to see the performances and astronomical images. Booths were installed for activities with the children, workshops on telescopes and conversations with astronomers. A set of posters with explanations of the lunar eclipse and Saturn were placed in the fashion of a science exhibit. The attendance at

maximum was estimated to be 20,000, and altogether the total attendance was about 50,000. We estimate that 5,000 people viewed the eclipse through a telescope at the Main Square! In order to organize such an event, teamwork was essential. The participation of amateurs was fundamental; they contributed not only with their telescopes, but also with their enthusiasm. This was our first experience with such a large-scale event, and we are happy to report that it was a great success.

## 400 Years *of the* Telescope Newsletter

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*Current Production*  
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