# **International Year of Astronomy 2009**

The International Year of Astronomy 2009 (IYA2009) is a global celebration of astronomy and its contributions to society and culture and marks the 400th anniversary of the first use of an astronomical telescope by Galileo Galilei. The aim of the Year is 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 will promote a greater appreciation of the inspirational aspects of astronomy that embody an invaluable shared resource for all nations.

The IYA2009 activities are taking place at global and regional levels, and especially at the national and local levels. National Nodes in each country are running activities throughout the year, aimed at establishing collaborations between professional and amateur astronomers, science centres, educators, and science communicators.

www.astronomy2009.org



United Nations International International Cultural Organization Union

Partners for the International Year of Astronomy 2009

# IYA2009 Cornerstone Projects

The International Year of Astronomy 2009 is supported by eleven Cornerstone projects. These are global programmes of activities centred on specific themes and are some of the projects that will help to achieve IYA2009's main goals; whether it is the support and promotion of women in astronomy, the preservation of dark-sky sites around the world or educating and explaining the workings of the Universe to millions, the eleven Cornerstones are key elements in the success of IYA2009.

### 100 Hours of Astronomy

An event 400 years in the making www.100hoursofastronomy.org



#### 2-5 April 2009

The 100 Hours of Astronomy IYA2009 Cornerstone Project is a four-day event designed to bring astronomy to the public around the world. Whether it is a few hours on one day or a 100-hour marathon event, how groups choose to participate is up to them. Plans should fit the resources and enthusiasm available. All activities and events during 100HA will bring astronomy to a new audience. This is a 100-hour, round-the-clock, round-the-globe event that includes live webcasts from research observatories, public observing events and other activities around the world.

### The Galileoscope

Millions looking at the sky www.galileoscope.org



The Galileoscope<sup>™</sup> is a high-quality, low-cost telescope kit developed for the International Year of Astronomy 2009 by a team of leading astronomers, optical engineers, and science educators. No matter where you live, with this easyto-assemble, 50-mm (2-inch) diameter, 25- to 50-power refractor, you can see the celestial wonders that Galileo first glimpsed 400 years ago and that still delight stargazers today.

The Galileoscope comes as a kit with simple instructions for no-tools assembly in 5 minutes or less, that will cost U.S. \$15 each plus shipping, or U.S. \$12.50 each plus shipping for orders of 100 or more. The Galileoscope will be augmented with educational activities and related materials for use by classroom teachers, planetarium presenters, astronomy-club members, and anyone else eager to share the treats of the telescopic sky with others.

### **Cosmic Diary**

The life of an astronomer www.cosmicdiary.org



The Cosmic Diary is not about the science of astronomy, but about what it is like to be an astronomer. More than 60 professional astronomers are blogging in text and images about their life, families, friends, hobbies and interests, as well as their work, latest research findings and the challenges they face. The Cosmic Diary bloggers represent a vibrant cross-section of working astronomers from around the world, they write in different languages and come from many different countries.

### Developing Astronomy Globally

Astronomy for all www.developingastronomy.org Developing

This Cornerstone Project acknowledges that astronomy needs to be developed in three key areas: professionally (universities and research); publicly (communication, media, and amateur groups) and educationally (schools and informal education structures). The focus will be on regions that do not already have strong astronomical communities. The implementation will be centred on training, development and networking in each of these three key areas. This Cornerstone will use the momentum of IYA2009 to help establish and enhance regional structures and networks that work on the development of astronomy around the world. These networks will support the current and future development work of the IAU and other programmes and should ensure that developing regions can benefit from IYA2009 and the work of the other Cornerstone projects. It should also address the question of the contribution of astronomy to development.

### The Portal to the Universe

A one-stop universe of news www.portaltotheuniverse.org



The Portal to the Universe (PTTU) seeks to provide a global, one-stop portal for online astronomy content, serving as an index, aggregator and a social networking site for astronomy content providers, laypeople, press, educators, decision-makers and scientists. PTTU will feature news, image, event and video aggregation; a comprehensive directory of observatories, facilities, astronomical societies, amateur astronomy societies, space artists, science communication universities; and Web 2.0 collaborative tools, such as the ranking of different services according to popularity, to promote interaction within the astronomy multimedia community.

### She is an Astronomer

Breaking down misconceptions www.sheisanastronomer.org



SHE IS AN ASTRONOMER

She Is an Astronomer will promote gender equality in astronomy (and science in general), tackling bias issues by providing a web platform where information and links about gender balance and related resources are collected. The aim of the project is to provide neutral, informative and accessible information to female professional and amateur astronomers, students, and those who are interested in the gender equality problem in science. We believe that providing this information will help increase the interest of young women to study and pursue a career in astronomy.

### Astronomy and World Heritage

Universal treasures www.whc.unesco.org



UNESCO and the IAU are working together to implement a research and education collaboration as part of UNESCO's thematic initiative, Astronomy and World Heritage. The main objective is to establish a link between science and culture on the basis of research aimed at acknowledging the cultural and scientific values of properties connected with astronomy. This programme provides an opportunity to identify properties related to astronomy located around the world, to preserve their memory and save them from progressive deterioration. Support from the international community is needed to implement this activity and to promote the recognition of astronomical knowledge through the nomination of sites that celebrate achievements in science.

### Galileo Teacher Training Program



www.galileoteachers.org

The International Year of Astronomy 2009 (IYA2009) provides an excellent opportunity to engage the formal education community in the excitement of astronomical discovery as a vehicle for improving the teaching of science in classrooms around the world. An incredibly rich store of useful astronomy resources is available for such an effort, much of it in digital form and freely available on the internet. However, experienced educators and outreach specialists identify a critical impediment: many teachers lack the training to understand these resources or use them effectively in their curricula. To address this problem and to sustain the legacy of IYA2009, the IAU is embarking on a unique global effort to empower teachers by developing the Galileo Teacher Training Program (GTTP).

### Universe Awareness

One place in the Universe www.unawe.org



Universe Awareness (UNAWE) is an international programme that exposes very young children in underprivileged environments to the scale and beauty of the Universe. UNAWE illustrates the multicultural origins of modern astronomy in an effort to broaden children's minds, awaken their curiosity in science and stimulate global citizenship and tolerance. Using the sky and children's natural fascination with it as common ground, UNAWE creates an international awareness of our place in the Universe and our place on Earth.

### Dark Skies Awareness

Seeing in the dark www.darkskiesawareness.org



For this Cornerstone project the IAU will collaborate with the US National Optical Astronomy Observatory (NOAO), representatives of the International Dark-Sky Association (IDA), the Starlight Initiative and other national and international partners in dark sky and environmental education on several related themes. The focus will be on three main citizen-scientist programmes to measure local levels of light pollution. These programmes will take the form of "star hunts" or "star counts", providing people with a fun and direct way to acquire heightened awareness about light pollution through firsthand observations of the night sky. Together the three programmes will cover the entire International Year of Astronomy 2009, namely GLOBE at Night (in March), the Great World Wide Star Count (in October) and How Many Stars (January, February, April through September, November and December).

### From Earth to the Universe

The beauty of science

www.fromearthtotheuniverse.org EARTH\_Universe

The International Year of Astronomy 2009 is an unprecedented opportunity to present astronomy to the global public. From Earth to the Universe (FETTU) brings wonderful astronomical images to a wider audience in non-traditional venues. In delivering these images and the science behind them to public parks, metro stations, art centres and other locations, individuals who might normally ignore or even dislike astronomy, or science in general are engaged.

# **IYA2009** Special Projects

The Cornerstone projects are supported by a number of Special projects, which will develop interactions and link the different initiatives and projects within IYA2009. These projects provide extra means to achieve the IYA2009's main goals and objectives.

#### The World at Night

The World at Night (TWAN) will create and exhibit a collection of stunning photographs and time-lapse videos of the world's most beautiful and historic sites against a night-time backdrop of stars, planets and celestial events.

www.twanight.org

#### 400 Years of the Telescope

The 400 Years of the Telescope project is an exciting multimedia celebration of Galileo's first telescopic observations of the cosmos, and the resulting journey of discovery for humanity. www.400years.org

#### The mutual phenomena of the Galilean satellites of Jupiter

In this project the organisers propose the participation in the observation of the mutual phenomena of the Galilean satellites of Jupiter, joining an international network of observers.

www.astronomy2009.org/globalprojects/specialprojects/galileansatellites/

#### Around the World, Around the Sky

Taking up the title of a ten film series on the history of astronomical observatories from antiquity until today broadcasted by Arte in 1990, this project deals with astronomy and observatories, but in present time, with a new story and a new scope.

www.astronomy2009.org/globalprojects/specialprojects/aroundtheworld/

#### **Exoplanet Hunters**

A 52 minute documentary. Our planet Earth is increasingly at stake in all aspects. Research carried out on other planets in space can develop knowledge of our own world and its protection.

www.astronomy2009.org/globalprojects/specialprojects/exoplanets

#### Celebrating the 1919 Eclipse at Principe

This Special project will celebrate the historic 1919 eclipse expedition, led by Sir Arthur Eddington and organised by the Royal Astronomical Society, to the African equatorial island of Príncipe. www.1919eclipse.org

#### The Sky - Yours to Discover

This is a project which invites children and young people to gaze up at the sky and identify stars, imagine new constellations, and create original stories.

www.astronomy2009.org/globalprojects/specialprojects/sky/

#### BLAST!

BLAST! is astrophysics Indiana Jones-style! The movie takes the viewer on a journey around the world and across the Universe to launch a revolutionary new telescope on a NASA high-altitude balloon. www.blastthemovie.com

#### StarPeace

StarPeace aims at connecting people living on two sides of borders between different countries by conducting joint star parties to show that the sky can act as a bridge to join the people of the world regardless of the race, culture or nation they belong to.

www.starpeace.org

## **IYA2009** Official Products



Book - The Cosmic Detective By Dr Mani Bhaumik www.astronomy2009.org/resources/ products/cosmicdetective/



Eyes on the Skies The IAU's book and movie celebrating the 400th anniversary of the telescope www.eyesontheskies.org



Redshift 7 Premium Planetarium software http://www.redshift-live.com/



400 Years of the Telescope High definition documentary www.400years.org



SkyScout Personal Planetarium www.celestron.com/skyscout/index.php



FirstScope Telescope An ideal entry level astronomical telescope www.celestronlife.com/IYA09/



Star Walk The Star gazing software for iPhone http://starwalk.mobi/

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Organisational Associates



