

INTERNATIONAL YEAR OF
ASTRONOMY
2009



THE UNIVERSE , YOURS TO DISCOVER



United Nations
Educational, Scientific and
Cultural Organization



International
Astronomical
Union

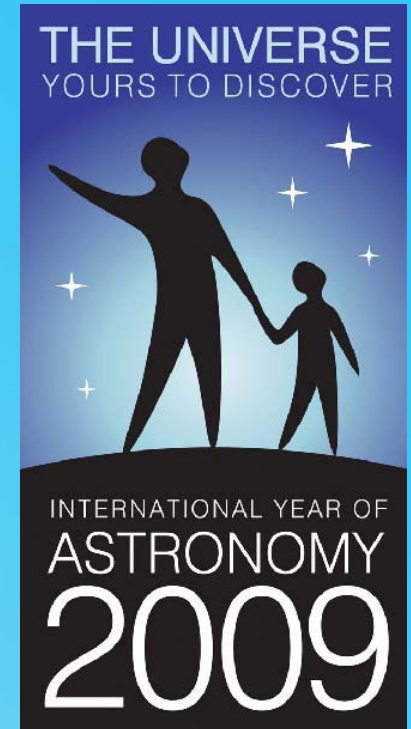
The International Year of Astronomy

Vision

To help the citizens of the world rediscover their place in the Universe through the day and night time sky, and thereby engage a personal sense of wonder and discovery.

Celebration

A global celebration of astronomy and its contributions to society and culture, highlighted by the 400th anniversary of the first use of an astronomical telescope by Galileo.



Goals & Objectives

- Increase **scientific awareness**.
- Promote widespread access to new knowledge and **observing experiences**.
- Empower astronomical communities in **developing countries**.
- Support and improve formal and informal **science education**.
- Provide a **modern image of science** and scientists.
- Facilitate new **networks** and strengthen existing ones.
- Improve the **gender-balanced** representation of scientists at all levels and promote greater involvement by **underrepresented minorities** in scientific and engineering careers.
- Facilitate the preservation and protection of the **world's cultural and natural heritage** of dark skies and historical astronomical sites.



Organisational Structure

IAU President: Catherine Cesarsky
IAU General Secretary: Karel van der Hucht

Chair: Catherine Cesarsky
Secretary: Lars Lindberg Christensen

Coordinator: Pedro Russo



Current Status (203 days to go...)

- 118 National Nodes / Aim: 140 Nations
- 64 National Websites
- 20 Organisational Nodes
- 16 Organisational Associates
- 11 Cornerstone Projects
- 2 Special Projects
- 11 Special Task Groups



100 Hours of Astronomy

- 100 Hours of Astronomy Global Cornerstone Project
- Task group co-chairs:
 - Mike Simmons
(Astronomers without Borders)
mikes@astronomerswithoutborders.org
 - Douglas Pierce-Price
(ESO) dpiercep@eso.org
- A 100-hour, round-the-clock, round-the-globe event, including
 - 24 hours of live webcasts from research observatories
 - public observing events, star parties, and other activities



24-hour Live Observatory Webcast

- *A unique live webcast over 24 hours*
- Follow night and day around the globe, visiting large research observatories
- Follow the nighttime for optical/infrared, but also include solar/radio/space observatories
- Find out what astronomers are doing *now*
 - Who is observing?
 - What are they researching?
 - What do they hope to discover?
 - What are the conditions like tonight?
- Ask the astronomers questions
- See exclusive astronomical images from each observatory
- Perhaps even vote for observations to be made that night



24-hour Live Observatory Webcast

- Webcast to be hosted by presenter(s) at ESO Garching
- A guide for participating observatories will be provided, including a baseline hardware/software “reference platform” needed to take part
- Each observatory segment will last approximately 10-15 minutes, giving up to about 100 observatory segments in total
- Basic structure of each segment:
 - Prerecorded footage (~5 minutes), e.g. daytime view of optical observatories, background information to set the scene
 - Live interview and discussion (~10 minutes), e.g. talk about what observations are being made and reveal an exclusive astronomical image
 - Details depend on individual observatories. Other possibilities include: observations chosen by the public; answering questions posed in advance on web forum
- “Listen again” archive will be available, in addition to further material from observatories not participating in the live 24-hour webcast. Part of a rich “100 Hours of Astronomy” website, featuring global event listings and timetables, discussion forums, and uploaded material.



Galileoscope

Millions looking at the sky

- Design a telescope kit of high educational utility and optical quality
- Manufacture and distribute one million **inexpensive** but high-quality telescope kits
- Build in maximum **educational value** and utility: Integrate kits into basic inquiry-based educational material on image formation and telescopes for more extended education programs.
- Design a **professional development** programme for educators to increase the reach of the kit
- **Chair: Rick Fienberg (USA)**



www.galileoscope.org

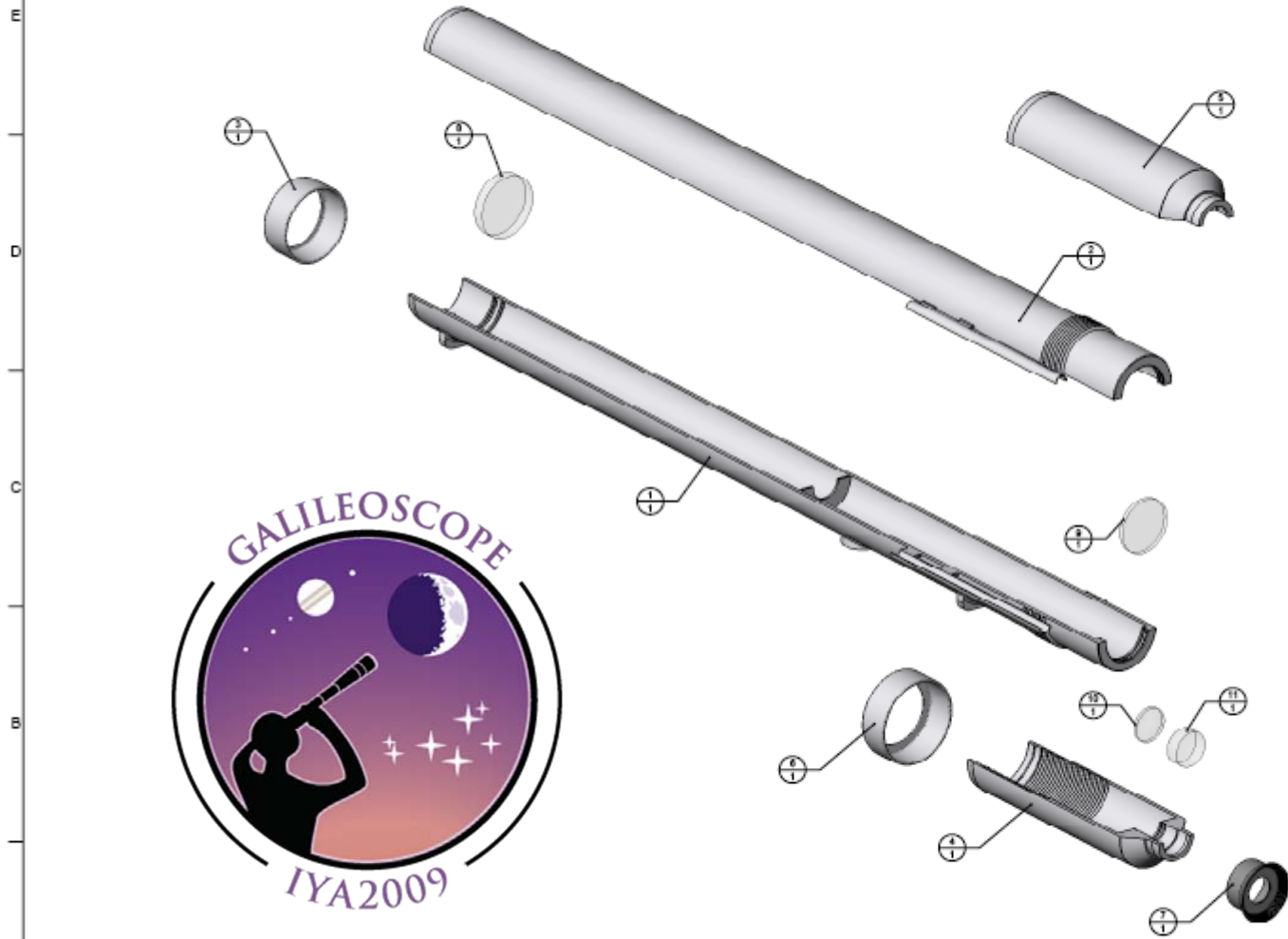


Galileoscope

Millions looking at the sky

NOTES: UNLESS OTHERWISE SPECIFIED:

1. SEE GRAPHICS AREA FOR SPECIFIC NOTES.



ITEM NO.	QTY	PART/ASSY NUMBER	DESCRIPTION	VENDOR
1	1	TELESCOPE TUBE BOTTOM	SUN CUSTOM PROPS	
2	1	TELESCOPE TUBE TOP	SUN CUSTOM PROPS	
3	1	TELESCOPE TUBE END CAP	SUN CUSTOM PROPS	
4	1	EYEPiece FOCUSER BOTTOM	SUN CUSTOM PROPS	
5	1	EYEPiece FOCUSER TOP	SUN CUSTOM PROPS	
6	1	EYEPiece FOCUSER END CAP	SUN CUSTOM PROPS	
7	1	EYEPiece SLEEVE	SUN CUSTOM PROPS	
8	1	H4.2 DOUBLET	SUN CUSTOM PROPS	
9	1	D8 NEGATIVE	SUN CUSTOM PROPS	
10	1	D8 BICOVEX	SUN CUSTOM PROPS	
11	1	D8 DOUBLET	SUN CUSTOM PROPS	

MATERIAL:		TOLERANCES UNLESS OTHERWISE NOTED		NATIONAL OPTICAL ASTRONOMY OBSERVATORY FUNDING BY ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY AND SPACE SCIENCE (AURA) NATIONAL SCIENCE FOUNDATION	
DO NOT SCALE DRAWING		NAME		USED ON	
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17

16

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14

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Cosmic Diary

The life of an astronomer

The Cosmic Diary - Blog

- Astronomers will blog about their life, families, friends, hobbies, and interests, as well as their latest research findings and the challenges that face them in their research.
- They represent a vibrant cross-section of female and male working astronomers from around the world
- 24 bloggers from 24 countries.

Cosmic Diary - Book

- Blogger's Profile
- Institution's Profile
- Feature Article

Cosmic Diary - Documentary

- Documentary featuring some of the bloggers, in collaboration with National Geographic Europe.

Chair: Mariana Barrosa (IAU/ESA/Hubble)

www.cosmicdiary.org



Cosmic Diary

The life of an astronomer

The Cosmic Diary is not just about astronomy.

It's more about what it is like to be an astronomer.

The project has three different and complementary components:

The **Cosmic Diary Blog**:

Professional astronomers will blog in text and images about their life, families, friends, hobbies, and interests, as well as their work – their latest research findings and the challenges that face them in their research.

The **Cosmic Diary Book**:

- ~24 chapters, each corresponding to one blogger.
- Photos and text about the city or region where the blogger works;
- Photos and text about the scientific institution where the blogger works;
- Photos and text about the blogger;
- **Feature article** with scientific explanation written by the blogger.

The **Cosmic Diary Documentary**:

TV documentary with interviews with the bloggers



Cosmic Diary

The life of an astronomer

The bloggers represent a vibrant cross-section of female and male working astronomers from around the world. They will write in many different languages and come from five different continents

We have now confirmed 27 candidates, from Belgium, Benin, Brazil, Croatia, Finland, France, Germany, Indonesia, Israel, Jordan, Lithuania, New Zealand, Norway, Philipines, Portugal, Serbia, Spain, South Africa, Sudan, Tajikistan, Turkey, Uganda, USA and Vatican City.

12 bloggers have already written their feature articles which are now being edited in a wide range of scientific topics like:

- Astrometry
- Evolution of the Earth-Moon system
- Looking at Titan: an Earth-like world
- Exoplanets: the quest to find another worlds
- Star formation
- Sun-Earth interaction:the sun shines to all
- Meteorites
- The great universal cookout: the origin of elements
- The ins and outs of a star
- Our evolving Universe



Cosmic Diary

The life of an astronomer



The screenshot shows the Cosmic Diary website interface. At the top, there is a header with the Cosmic Diary logo, a central image of an open book, and various icons including 'JUPITER', 'VENUS', 'MERCURY', and 'MARS'. Logos for IAU and the International Astronomical Union are also present. Below the header, the main content area is divided into two columns. The left column contains a 'Welcome to the Cosmic Diary Blog' section, followed by a 'This week topics is the Bloggers' section. The right column contains an 'About Cosmic Diary' section. At the bottom, there is a footer with logos for IAU, INAF, and other organizations.

THE COSMIC DIARY
2009

IAU

JUPITER

VENUS

MERCURY

MARS

Cosmic DIARY

BLOGGERS

Welcome to the Cosmic Diary Blog

This week topics is the Bloggers

Saskia Hekker - The Netherlands



Saskia Hekker, 29 years
Born in Heere

Place of Work:
Royal Observatory of Belgium
Brussels, Belgium

Contact:
Saskia@oma.be

Håkon Dabbe - Norway

John Hearnshaw - New Zealand

Brother Guy Consolmagno - Vatican City

Emanuel Sungging - Indonesia

Tijana Prodanovic - Serbia

K. Yavuz Ekki - Turkey

Artvah Yamani Riyadi - Indonesia

Athens Coustantis - Greece

About Cosmic Diary

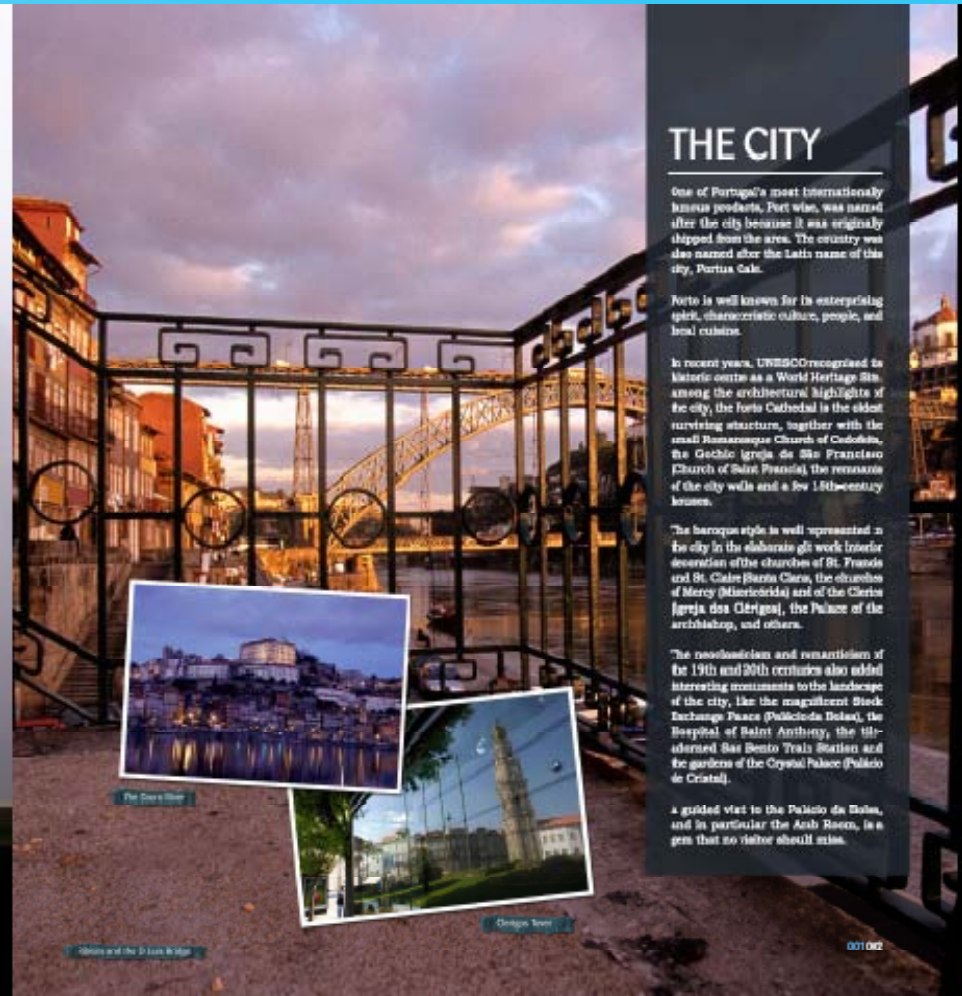
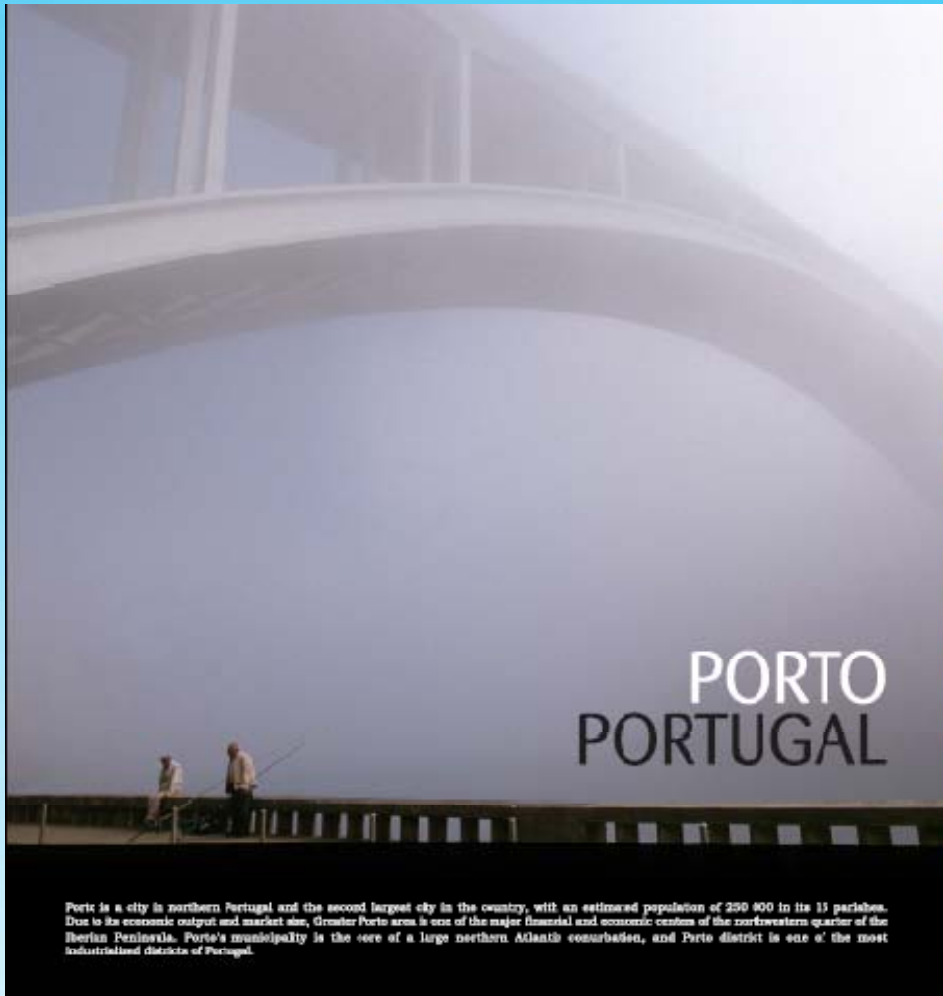
Cosmic Diary is a project that involves astronomers from all around the world.

IAU and INAF initiative Organizational Association



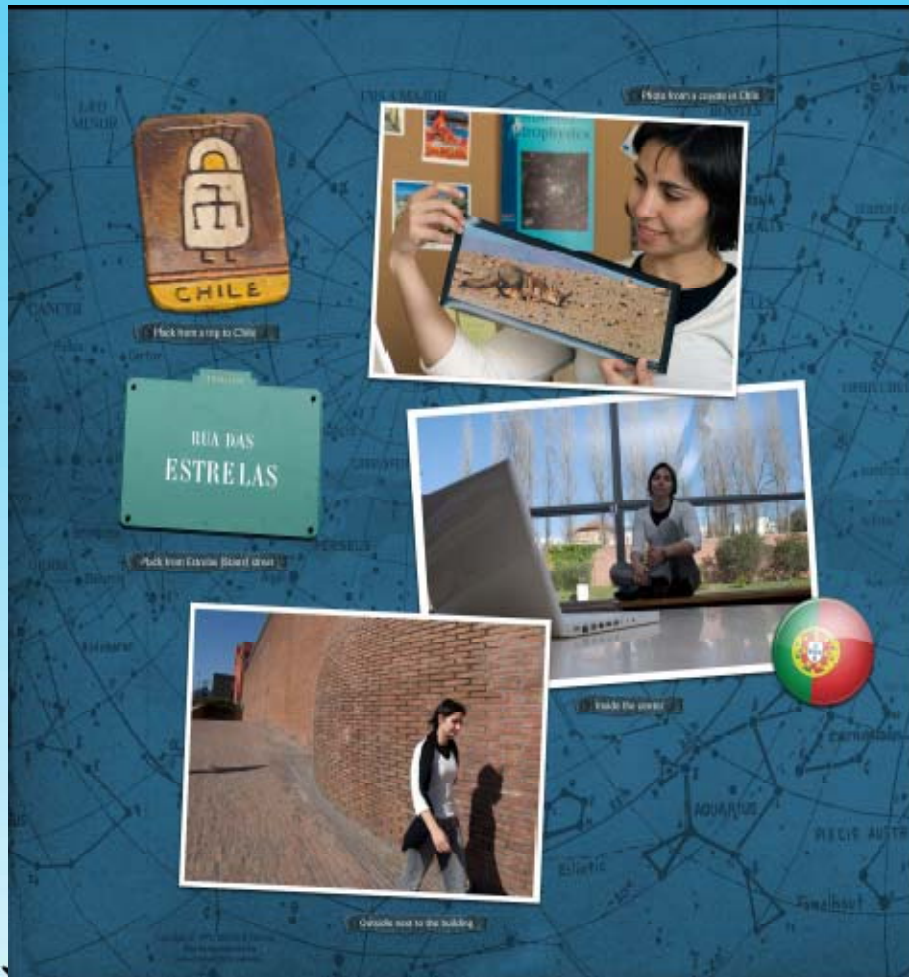
Cosmic Diary

The life of an astronomer



Cosmic Diary

The life of an astronomer



JOANA ASCENSO

Joana dos Santos Dias Ascenso was born in Coimbra (Portugal) on September 8, 1976. She was the first of two daughters of Jaime and Julieta Ascenso, an entomologist and a laboratory analyst, respectively, and sister to Alexandre Ascenso. After living in Coimbra until the age of 18, Joana left to study Physics and Applied Mathematics - Astronomy in the University of Porto. She finished the Licenciatura in 2002 and started a M.Sc. on the spectral properties of T-Tauri stars, also at the University of Porto. As a student she was an explainer for the StarLab, a portable planetarium that takes astronomy to schools, until the finalization of Porto until the end of her M.Sc. in 2004.

In 2004 she started a Ph.D. thesis on embedded clusters and star formation with Dr. João Alves and Prof. Teresa Lago. The first two years of the thesis were divided between CAUP (Porto, Portugal) and ESO (Garching, Germany). When Dr. João Alves moved to the Qatar Abu Observatory project, the thesis continued between Porto and Granada (Spain). In 2005 she had her first experience as a university lecturer, responsible for teaching data reduction and photometry to senior year students of the Licenciatura in Astronomy (she herself had completed a few years before). As an observational astronomer, she visited the Chilean observatories La Silla and Paranal at least once a year since the beginning of her thesis. She will finish her Ph.D. thesis in early 2009 and will then continue her academic career in star and planet formation in a yet unknown location. Apart from astronomy, she is involved in a project for the development of technological solutions for cinema (still encyclopaedia), and in a social project for the diffusion of free software in schools.

Centro de Astronomia da Universidade do Porto (CAUP)

The Centro de Astronomia da Universidade do Porto is a scientific private association of the University, recognized of public utility, which started its activities in October 1990.

Its objectives include the promotion and support of Astronomy through research, education at the graduate and undergraduate levels, activities for Primary and Secondary Schools and science outreach and popularization of Astronomy.

The research activity at CAUP is organized in two large science teams on the following topics:

Origin and Evolution of Stars and Planets

The long objectives of the team are to address the important issues of the fundamental physics during the formation and evolution of stars and planets. Both observational and modeling components are addressed.

Galaxies and the Evolution of the Universe

The main objective of the team is to further the understanding of the formation and evolution of large-scale structures in the Universe. This is achieved by exploring two lines of research: constraining cosmological parameters relevant to the formation and evolution of large-scale structure in the Universe; identification of physical processes involved in the formation and evolution of galaxies.

Astronomical Instrumentation

The scientific participation in the involved development of Astronomical Instrumentation, which transpires both major scientific areas in CAUP, is also present. Its importance stems from the need to secure privileged access to existing and future facilities of the European Organization for Astronomical Research in the Southern Hemisphere (ESO) and of the European Space Agency (ESA) and to contribute to the long term development of Astronomy in Portugal.



Cosmic Diary

The life of an astronomer

Chair: Mariana Barrosa, IAU/ESO/IYA2009, Portugal

Coordination/Edition: Lee Pullen, UK

Design: André Roquette

Web development: Nuno Marques

Photography: António Sá

- Avivah Yamani, Rigel Kentaurus , Indonesia Astronomy weblog, Indonesia
- Alice Enevoldsen, Pacific Science Center, USA
- Alberto Krone Martins, Universidade de S. Paulo / Universite de Bordeaux, Brazil
- Kevin Govender, South African Astronomical Observatory, South Africa
- Henri Boffin, ESO, Public Affairs Department, Belgium



The Portal to the Universe



Why, what, how, when

- **WHY:** Hard to keep track of the myriad of daily new press releases, images, animations and illustrations
- **WHAT:** A one-stop shop for all the astro-news
- **HOW:** An IYA2009 Cornerstone Project, partly funded by a generous in-kind donation from ESA/Hubble
- **WHEN:** Prototype ready Nov. '08, open doors Jan. '09

www.portaltotheuniverse.org



The Portal to the Universe

The Portal to the Universe — A one-stop universe of news

1.Enabling access: To *aggregate* (pull) from content providers incl. all astronomy-related dynamic content (e.g. RSS feeds of blogs, images, news, etc) and distribute (push) to the users;

2.Index and archive: To collect and maintain a central repository of useful information, including resources such as educational materials and more, addresses for all astronomy stakeholders such as amateur clubs, planetariums, observatories etc.

3.Enabling communication and collaboration: Create and maintain a network of all stakeholders incl. establishing a social network for all astronomy interested.



www.portaltotheuniverse.org



PORTAL TO THE UNIVERSE

Welcome James Galileo | [Account](#) | [Search](#)



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- Observatories
- Astronomical societies and groups
- Planetariums/science centers
- Speaker's/Writer's Bureaus
- Equipment manufacturers
- Educational facilities
- Equipment Manufacturers
- Public Advocacy groups
- Public Outreach groups
- Publications
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The Universe – LIVE!

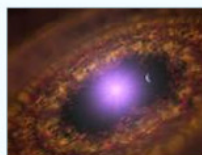
AstroNews Highlights | [Link](#)



#1 | Hazy red sunset on extrasolar planet

01 Jan. 2009 04:24:23 UT | **ESA/Hubble**: The NASA/ESA Hubble Space Telescope has given astronomers a fascinating new insight into the atmosphere of a planet in orbit around another star. The observations provide evidence of the presence of hazes in the... [read more...](#)

Coverage: BBC, Earth & Sky | Comments: 14 | Views: 2009 | Rating: ★★★★★



#2 | Astronomers discover youngest exoplanet

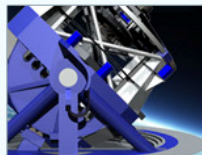
01 Jan. 2009 04:24:23 UT | **MPG**: German astronomers reported this week that they have discovered the youngest extrasolar planet found to date, a world that is still... [read more...](#)

Coverage: CNN, CNBC | Comments: 14 | Views: 2529 | ★★★★★

#3 | Deep Impact spacecraft flies past Earth

01 Jan. 2009 02:48:02 UT | **NASA**: NASA's Deep Impact spacecraft flew past Earth on New Year's Eve, a maneuver that puts the spacecraft on course for an extended mission to another... [read more...](#)

Coverage: CNN, LA Times | Comments: 24 | Views: 3258 | ★★★★★



#4 | LSST Receives \$30 Million from Bill Gates

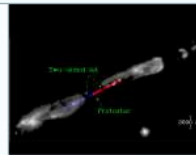
01 Jan. 2009 01:52:23 UT | **LSST**: The Large Synoptic Survey Telescope (LSST) Project is pleased to announce receipt of two major gifts... [read more...](#)

Coverage: SkyBlog, CNN | Comments: 31 | Views: 5014 | ★★★★★

#5 | Jets Are a Real Drag

01 Jan. 2009 01:24 UT | **CfA**: Astronomers have found the best evidence yet of matter spiraling outward from a young, still-forming star in fountain-like jets. [read more...](#)

Coverage: BBC, ARD | Comments: 23 | Views: 2009 | ★★★★★



More news

- 12 Apr. 2009 17:43 UT | **ESA**: Ariane 5 - sixth and final launch of 2007
- 12 Apr. 2009 16:29 UT | **NASA/GSFC**: WHITE DWARF STAR PULSES LIKE A PULSAR
- 12 Apr. 2009 12:10 UT | **LIGO** Sheds Light on Cosmic Event
- 12 Apr. 2009 10:56 UT | **Subaru**: SAY ALOHA TO NEW HICIAO CAMERA...
- 12 Apr. 2009 09:20 UT | **ESO**: Flare found on ultra-fast rotating star...

Astronomy POD



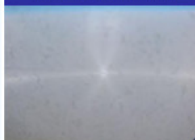
01.09 11:18 | [Geminids in 2007](#)

Lunar POD



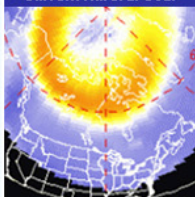
01.09 09:02 | [Lunar Orbiter IV](#)

Earth Science POD



01.09 07:22 | [Antisolar Arcs](#)

Current Auroral Oval



Lastest Picture



Submitted by:
[John McDonal](#)

Latest Vodcast



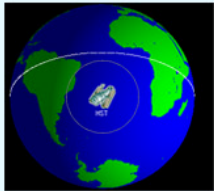
01.09 12:02 | [Hubblecast E12: The Sun](#)

Latest Podcast



SPACECRAFT LIVE!

Where is Hubble now?



Where is ISS now?



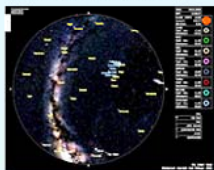
More spacecraft ...

Observing LIVE!

VLT Observatory

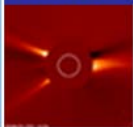
Observing: Orion Nebula
(18:09:50 -19:43:48)
<http://www.eso.org/VLT>
11 minutes ago from web

Jodrell Bank Observatory

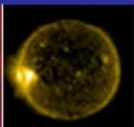


More observatories...

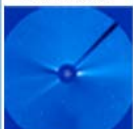
Sun of the Moment



Lasco C2



EIT 284



Lasco C3



MD 1

Space Weather

FLARE	0-24 hr	24-48 hr
CLASS M	10 %	10 %
CLASS X	05 %	05 %

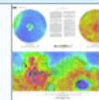
12 Apr. 2009 09:20 UT | ESO: Flare found on ultra-fast rotating star...
12 Apr. 2009 02:25 UT | NRAO: New View of Distant Galaxy Reveals Furious ...
11 Apr. 2009 23:20 UT | NASA/HUBBLE: MARS: CLOSEST APPROACH 2007

AstroBlog Highlights | more blogs

Mars got womped

08 Apr. 2009 01:24 UT | **ACast:** Let's face it, impacts are cool. Big, small, it really doesn't matter. Everyone likes a good geological train wreck...

[view entry](#) | Comments: 23 | Views: 2009 | ★★★★★



Northern Clouds of Saturn

06 Apr. 2009 22:06 UT | **TBlog:** This Cassini shot of Saturn's northern hemisphere does a fabulous job of showing the banding and storms within...

[view entry](#) | Comments: 35 | Views: 2009 | ★★★★★



If ET Calls, Would We Be Told?

25 Mar. 2009 13:54 UT | **UTBlog:** f a verified message from aliens is ever received, would the public be told about it? SETI - the Search for...

[view entry](#) | Comments: 03 | Views: 2009 | ★★★★★



Cool Shuttle pix

18 Mar. 2009 19:48 UT | **BABlog:** I am still filming Skeptologists, but for now, feast your eyes on these way cool pictures of the external tank of the...

[view entry](#) | Comments: 92 | Views: 2009 | ★★★★★



Highest Rated Today | 3 days | week | month

12 Apr. 2009 10:02 UT | Sun, 4/27 - National Radio Astronomy Observatory Open House
12 Apr. 2009 03:54 UT | Mysterious Universe
12 Apr. 2009 11:05 UT | Enoch Gives an Astronomy Lesson
12 Apr. 2009 21:28 UT | Crash collider destroys universe
12 Apr. 2009 08:59 UT | Hubble snaps a dead star on the rise
12 Apr. 2009 18:12 UT | Launch Pad Astronomy Workshop Participants for 2008
12 Apr. 2009 20:36 UT | Short Waves of Activity in the Satellite Universe

Sky Events

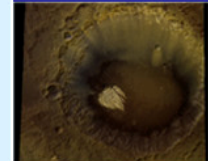


Asteroid	Date(UT)	Miss Distance	Mag.	Size
2005 WJ56	Jan. 10	10.9 LD	11	1.2 km
1885 Toro	Jan. 24	76 LD	13	6.2 km
2007 TU24	Jan. 29	1.4 LD	10	400 m

Latest Podcast

01.09.12:02 | Astronomy Cast
Ep. 69: The Large Hadron

Most Popular Image



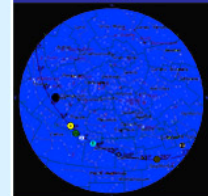
01.09.12:02 | Hubblecast E12:
The Sun

Most Popular Video



01.09.12:02 | Hubblecast E12:
The Sun

Sky



Astronomy and World Heritage

Universal treasures

UNESCO and the IAU are working together to implement a research and education collaboration as part of UNESCO's Astronomy and World Heritage project.

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.

IAU Contact: Karel van der Hucht (IAU General Secretary)



Universe Awareness

One place in the Universe

Universe Awareness is an international outreach activity that aims to inspire young disadvantaged children with the beauty and grandeur of the universe.

Universe Awareness 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.

Chair: Carolina Ödman (NL)



She is an Astronomer

Breaking down misconceptions

Promoting gender equality and empowering women is one of the United Nations Millennium Development Goals. The IYA2009 Cornerstone project, She is an Astronomer, will promote gender equality in astronomy (and in science in general) and tackle gender bias issues by providing a web platform where neutral information and links about gender balance and other related useful resources are collected.

Chair: Francesca Primas (ESO)

www.sheisanastronomer.org



SHE IS AN ASTRONOMER



- History
- Support Information
- Portrait Diary
- Ambassador Programme
- International Conference



She is an Astronomer

Breaking down misconceptions

Task Group

- Chair: Francesca Primas, (Italy, ESO)
- Eniko Patkos (Hungary, ESO)
- Helen Walker (UK, Rutherford Appleton Laboratory)
- Chris De Pree (USA, Agnes Scott College of Atlanta)
- Mary Beth Laychak (USA, Hawaii, Canada-France-Hawaii Telescope)
- Maria Lugaro (Italy, currently at the Astronomical Institute, University of Utrecht)
- Gloria Dubner (Argentina, Instituto de Astronomía y Física del Espacio)
- Yiping Wang (China, Purple Mountain Observatory in Nanjing)
- Sarah Maddison (Australia, Centre for Astrophysics & Supercomputing, Swinburne University of Technology)
- Danielle Alloin (France, CNRS)
- Lebohang William Kompi (Lesotho, National University of Lesotho)
- Patricia Knezek (USA, NOAO, Tucson)
- Doug Duncan (USA, Dept. of Astrophysical & Planetary Sciences, University of Colorado)

Home

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WHAT IS SHE IS AN ASTRONOMER?
Approximately $\frac{1}{4}$ of all professional astronomers are women. The field continues to attract women and benefits from their participation, but there is a wide geographical diversity, with some countries having none, and other having more than 50% female professional astronomers. Moreover, the significant number of female dropouts hints at the fact that scientific careers are heavily affected by social and cultural factors, and are not determined solely by ability. The IYA2009 Cornerstone Project She is an Astronomer aims at promoting gender equality in astronomy (and in science in general) and at tackling gender bias issues, by providing a web platform where neutral information and links about gender balance and other related useful resources are collected.

www.sheisanastronomer.org



Dark Skies Awareness

Seeing in the dark

3 Main Programmes:

- GLOBE at Night (in March)
- Great World Wide Star Count (in October)
- How Many Stars (January, February, April through September, November and December).

Partnering with Other Programs on Dark Skies

Related Events:

- World Night in Defence of Starlight (April 20)
- Earth Hour (March 28)
- (Inter)national Dark Sky Week
- International Sidewalk Astronomy Night,
- IYA2009 Cornerstone Projects:
 - 100 Hours of Astronomy
 - Galileo Teachers Training Programme.



www.darks skiesawareness.org

Chairs: Connie Walker (NOAO)



Galileo Teachers Training Programme



GALILEO
Teacher Training Program

Chairs: Rosa Doran (Portugal)
& Jim Manning (USA)

www.galileoteachers.org

- **Global network** of global coordinator and six regional nodes for coordinating teacher professional development using astronomy education tools.
- IYA2009-related astronomy **resource kit**, with both physical and online elements, for adaptation as necessary around the world.
- **Web-based repository** of project resources, both educational and network-related.
- **Professional development** teacher workshop created with Galileo Trainers and executed by same and coordinated through the network.



From Earth to the Universe

FROM **EARTH** TO THE *Universe*

From Earth to the Universe endeavors bring the wonderful astronomical images to a wide audience in non-traditional venues. In delivering these images (and the science behind them) to public parks, metro stations, art centers, and other locations, we wish to engage individuals who might normally ignore or even dislike astronomy, or science in general.

Chairs: Kimberly Kowal Arcand & Megan Watzke (USA)

www.fromearthtotheuniverse.org



From Earth to the Universe

FROM EARTH TO THE UNIVERSE EXHIBITION

INTERNATIONAL YEAR OF ASTRONOMY 2009



Solar Piepol
Sun H-alpha



ATNF A hole in the gas in our Galaxy/
GSH 277+00+36



Crawford
The Eyes, NGC4435 & NGC4438



De Martin
Vela Supernova Remnant



Galax
M31



Hubble
Helix Nebula



J.D. Brink
Milky Way Southern Hemisphere



Schedler
Butterfly Nebula



Spitzer/Chandra/Hubble
M82



ESO
Tarantula Nebula



ING
M92



Jean-LucDauvergne
Moon



Adam Block
Antares



ESA Venus Express
Venus Visible/UV



WSRT
NGC 6946



JAC/UKIT
Orion Nebula



ESA SOHO
Sun UV



Gabany
NGC 7023



Guisard
Scorpio Constellation



Calar Alto North America (NGC 7000)
and Pelican (IC 5067-5070) nebulae



CFHT
Abell 2151



AKira Fujii
Lunar Eclipse



Schirmer
Elephant Trunk vdB142



CTIO
Carina Nebula



NRAO
Fornax-A



Nicolas Outters
Rosette Nebula



Gemini
Jupiter



KPNO
M16 Eagle Nebula Wide Field



David Malin
Corona Australis reflection nebula



McEels
LMC



Jack Newton
Comet & Pleiades



Spitzer
LMC



Chandra X-ray Observatory
Cassiopeia A



Ciel et Espace
NGC 3372 in Carina

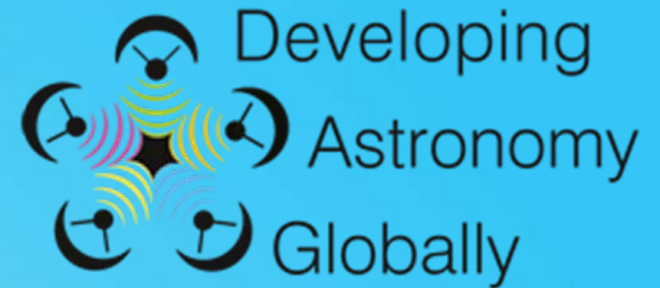


Gendler
Cone

Developing Astronomy Globally

Astronomy needs to be developed, both professionally (universities, research), publicly (communication, media) and educationally (schools) in various countries that do not have strong astronomy communities. It will include such activities as research exchange programmes, young astronomer development programmes, astronomy communication training including workshops and resource sharing, infrastructure development where possible.

Chair: Kevin Govender (South Africa)



Global Cornerstone Projects

Cornerstone projects \ IYA2009 Goals	Scientific awareness	access to knowledge and observing experiences	Astronomical communities in developing countries	Formal and informal science education	Modern image of science and scientists	Networks	Gender-balanced representation of scientists	Preservation of dark skies and historical astronomical sites
100 Hours of Astronomy	■	■			■	■		
The Galileoscope	■	■	■	■		■		
Cosmic Diary	■				■	■	■	
The Portal to the Universe	■	■		■	■	■		
She is an Astronomer	■				■	■	■	
Dark Skies Awareness	■					■		■
Astronomy and World Heritage	■					■		■
Galileo Teacher Training	■		■	■		■		
The Universe Awareness	■		■	■		■		
The Universe from the Earth	■	■		■		■		
Developing Astronomy Globally	■	■	■	■		■		



The World at Night

Special IYA2009 Project

The World At Night is a new programme to create and exhibit a collection of stunning photographs of the world's most beautiful and historic sites against a nighttime backdrop of stars, planets and celestial events. 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.

Very strong links with some IYA2009 Cornerstone Projects: From Earth to the Universe, Dark Skies Awareness and IAU/UNESCO Astronomy and World Heritage

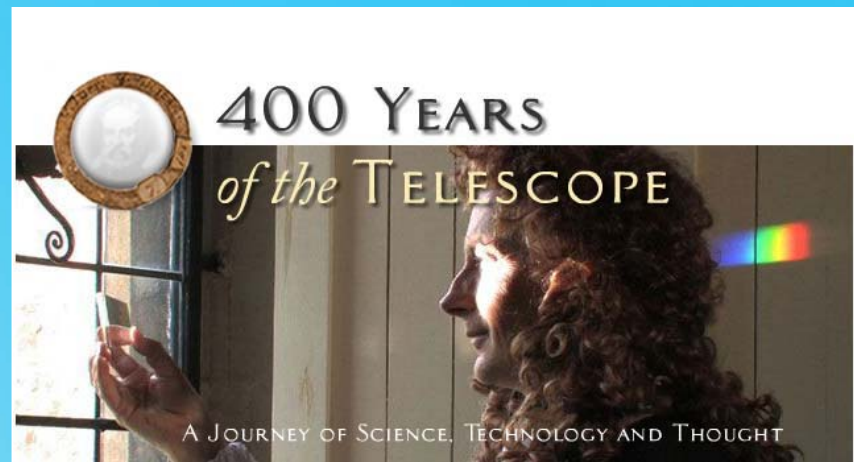
Leader: Babak Tafreshi (Iran)



400 Years of the Telescope

Special IYA2009 Project

- **High definition documentary**, 400 Years of the Telescope, to be distributed internationally for broadcast in 2009. Cinematic version available for theater and IMAX theaters
- Companion **full-dome and traditional planetarium** programme, *Two Small Pieces of Glass*, distributed by International Planetarium Society.
- Coordinated **outreach programmes** with educational organizations, amateur astronomy organizations, national broadcasters and planetariums.
- 400 Years of the Telescope companion coffee table **book**
- Producer: Kris Koenig



www.400years.org



Special Task Groups

- **Opening event at UNESCO**, Chair: Francoise Combes (France)
- **Closing Event** (under establishment)
- **EU Seventh Framework Programme**, Chair: Claus Madsen (ESO)
- **Kepler**, Chair: Terry Mahoney (UK)
- **Galileo**, Chair: Paolo Galluzzi (Italy)
- **IYA2009 New Year's Eve Events**, Chair: Helen Sim (Australia)
- **Solar Physics**, Chair: Bruno Sánchez-Andrade Nuño (Spain)
- **Evaluation Chairs**: Pedro Russo and Mariana Barrosa (ESO)
- **Philatelic**, Chair: Michael C. Howell (USA)
- **New Media**, Chair: Pamela Gay (USA)
- **Extra solar Planets**, Chair: Jean Schneider (USA)



World Wide Celebration

- 115 National Nodes
- Aim: 140 Nations
- The largest astronomical (EPO) network ever!



World Wide Celebration

e.g.:

- Sidewalk Astronomy
- Astronomy Olympiads
- Open Doors
- Star parties
- Public Talks
- Exhibitions
- Stamps
- Science Cafés
- Websites
- Documentaries

...



Sidewalk Astronomy



Exhibits



Science Fairs



Planetarium Shows



World Wide Celebration



Stamps



Contests



ÖBB EC 669: "Astronomiejahr 2009"



Statues



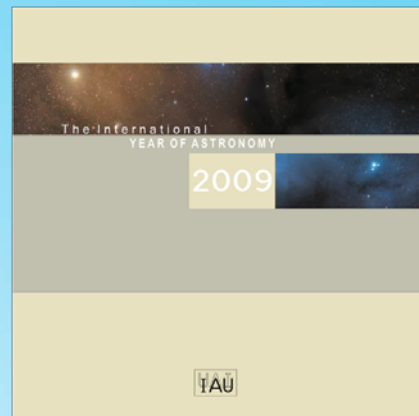
Schools



Movies



Communication Products



■ Website

- Version 1 (January 2007)
- Version 2 (May-June 2008)

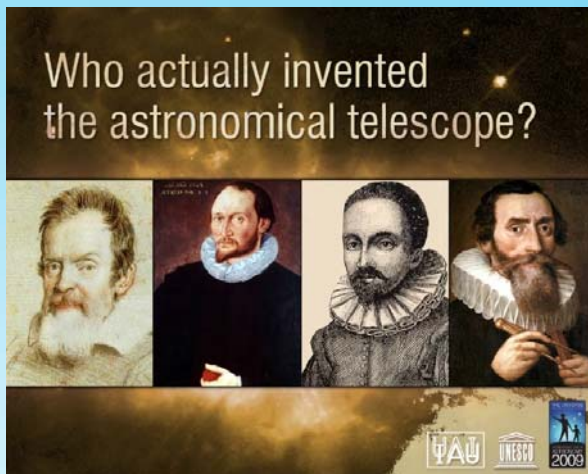
■ Trailer

■ Brochures

- Ver. 1 (October 2006)
- Ver. 2 (September 2007)
- Partnership Opportunities (October 2007)
- Ver. 3 (April 2008)



Communication Products



- **Weekly newsletters**
- **Presentations**
 - IYA2009 General
 - Who actually invented the astronomical telescope?
 - Astronomy
- **Poster**
- **Guidelines**
 - SPoCs
 - Branding and Identity
 - Cornerstone Projects
 - IYA2009 Global Projects
 - Evaluation



Communication Products



■ Product s Catalogue

- Movies
- Performances
- Books
- ...

■ Communicating Astronomy with the Public Journal



IYA2009 Evaluation

Objectives

To evaluate the results of the IYA2009 according to the pre-established objectives, as well the impact of the IYA2009 on the public, media, institutions and scientific community.

Deliverables

1. Evaluation Guide to SPoCs and Task Group Chairs
2. Develop a global evaluation strategy for the IYA2009 initiative
3. Support and advice the different IYA2009 projects in terms of evaluation
4. Establish a partnership(s) with Universities and Research Institutions in order to set up a centralized data coordination and analysis center, in the frame work of a research project.
5. Process and interpret the data collected by the IYA2009 Secretariat based in the evaluation reports of the several projects and national programmes.
6. Produce, revise and approve the final IYA2009 Evaluation Report



Meetings

ESO (Garching, Germany), 3-4 March 2007
www.communicatingastronomy.org/iya_eso

CAP2007 (Athens, Greece), 8–11 October 2007
www.communicatingastronomy.org/cap2007

MEARIM2008 (Cairo, Egypt), 5-10 April 2008
<http://www.mearim.cu.edu.eg>

AAS 212th Meeting, joint with the
ASP (St. Louis, USA), 1-5 June 2008
<http://www.aas.org/meetings/aas212>

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

JENAM2008 (Vienna, Austria), September 2008
<http://www.univie.ac.at/jenam2008>



Communicating Astronomy with the Public 2007
Communicating Astronomy to a Global Audience
<http://www.communicatingastronomy.org/cap2007/>
Eugenides Foundation / Planetarium
Athens, Greece 8-11 October 2007

Scientific Organizing Committee

- David Darling (President IAU, ESO) (UK, Chair)
- Demis Catherine (Orion Observatory) (Greece)
- Jan Haisan (IAC AT 433) (Mexico)
- Christos Gouliotis (Orion Observatory of Athens)
- Robert Hart (USA)
- Tim Ocker (USA)
- Jin Zhu (Beijing Planetarium)
- Patrik Witzel (South African Astronomical Observatory)

Local Organizing Committee

- Christos Gouliotis (Orion Observatory of Athens)
- Nikos Moutoufakis (National Observatory of Athens)
- Rajiv Vora (India)
- Demis Catherine (Eugenides Foundation / Planetarium)
- Kenneth Tegen (Eugenides Foundation / Planetarium)
- Maria Tsoulia (National Observatory of Athens)

Specific goals

- To prepare for the International Year of Astronomy 2009
- To make public educational knowledge global and accessible to everyone utilizing communication methods to connect with public, social and cultural leaders and inspirational initiatives
- To promote international collaboration
- To evaluate current tools and methods and prepare for future developments

Key topics

- Core Staff and Fund-raising considerations
- Generalization to the broader Physical Sciences program scope
- Audience, multimedia & outreach
- Social Impact and evaluation of astronomy communication
- Education and communication tools for the visually impaired
- Progress of IAU Commission 55: Communicating Astronomy with the Public

IAU International Astronomical Union
National Observatory of Athens
Eugenides Foundation



IYA2009 Roadmap

Feb: IYA2009 EC EG meeting
Feb: SPoCs “kick-off” meeting
Aug: Secretariat structure set up
Aug: Fundraising
Sep: Cornerstone Projects
Sep: Brochure ver. 2
Oct: CAP2007 conference
Dec: UN proclamation

'03-'06 Inception

'07 Planning

2003: IAU General Assembly in Sydney, AU
2005: UNESCO endorsement
2006: IAU General Assembly in Prague, CZ
2006: IAU EC WG structure set up



IYA2009 Roadmap

Jan: Opening Ceremony: UNESCO HQ, Paris, France

April: 100 Hours of Astronomy

Jan-Dec: Global Events

Global Cornerstone Implementation

Regional Events

National Events

Local Events

Aug: IAU General Assembly in Rio de Janeiro, Brazil

'08 Preparation

'09 Implementation

Jan – Dec: Cornerstone Projects development

Jan – Dec: National programmes development

Jan – Dec: IYA2009 SPoCs Regional Meetings

May: Brochure v. 3

June/July: IYA2009 Products: Books, Movies, Brochures, etc.

July: Website v. 2

Nov-Dec: First activities and events



IYA2009 Roadmap

'10 Evaluation

Jan: Closing Event (Italy)
Evaluations and Follow-up
National Reports
IYA2009 Secretariat Final Report
CAP2010 (South Africa): the legacy of IYA2009





United Nations
Educational, Scientific and
Cultural Organization



International
Astronomical
Union

www.astronomy2009.org

IYA 2009 Secretariat

Hubble European Space Agency Information Centre
Space Telescope-European Coordinating Facility
ESO – Garching – Munich – Germany

Contact:
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prusso@eso.org

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