



STARLIGHT

A COMMON HERITAGE

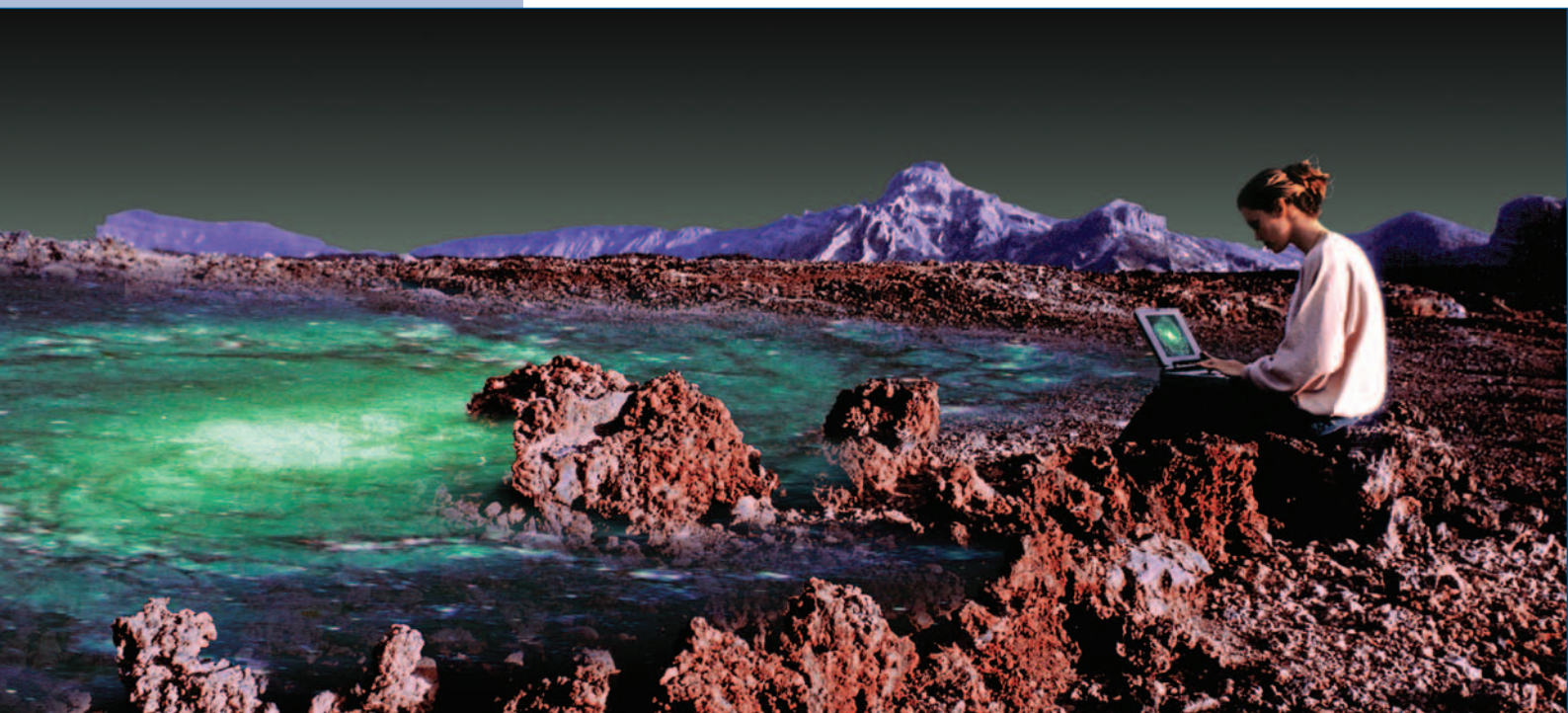
INTERNATIONAL INITIATIVE IN DEFENCE OF THE QUALITY
OF THE NIGHT SKIES AS MANKIND'S SCIENTIFIC,
CULTURAL AND ENVIRONMENTAL RIGHT

La Palma - April 2007



LA PALMA
APRIL 19-20, 2007

INTERNATIONAL CONFERENCE IN DEFENCE OF
THE QUALITY OF THE NIGHT SKIES AND
THE RIGHT TO OBSERVE THE STARS



STARLIGHT



Apart from the scientific, educational and cultural value of astronomy and the capacity to gain access to starlight, we have to admit that its impact and the benefits that astronomy and starlight currently provide are not generally sufficiently known or appreciated. Many of the major developments in communications, navigation systems and even in advanced medical imaging technologies have been due to the development of modern astronomy.

Today, we can consider the universe as a laboratory containing an infinity of undiscovered knowledge. The day to day observation of the universe provides new scientific achievements and technological benefits. Thus, the role of astronomy and astrophysics observatories must be considered from a far broader stand point.

However, access to this resource; a resource that can provide limited benefits and know-how for today's civilisation, is under serious threat from an uncurbed increase in light pollution, radio-electric disturbances and air pollution. All these factors have a special impact on the quality of our nocturnal observations of the skies.

The right to observe the stars also involves many other dimensions that directly affect many facets of our life. The mere opportunity to observe the firmament is an unquestionable element of our everyday quality of life, whilst also being a benchmark that enables us to appraise and re-discover the immense tangible and intangible cultural heritage that mankind has accumulated from observing clean night skies.

Much of our cultural heritage is founded on astronomy, or "knowledge of the stars". Stonehenge, Thebes, Ghiza, Chichen-Itza, Delos and Mesa Verde are just some of the monuments that symbolise this legacy, together with an infinity of artistic and ethnographic manifestations that are conserved throughout the world. This heritage is also expressed in how time is measured and the art of navigation in all ages. From Aristotle to Copernicus or Galileo,



The sky, our common and universal heritage, is an integral part of the environment perceived by humanity. Humankind has always observed the sky either to interpret it or to understand the physical laws that govern the universe.

This interest in astronomy has had profound implications for science, philosophy, religion, culture and our general conception of the universe.

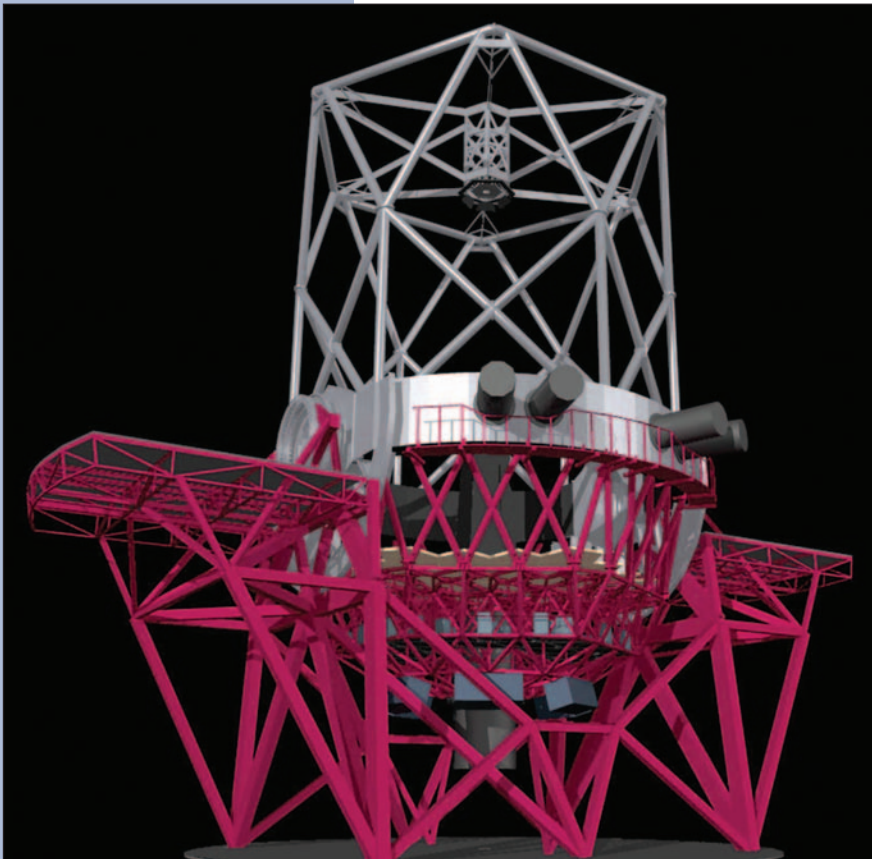
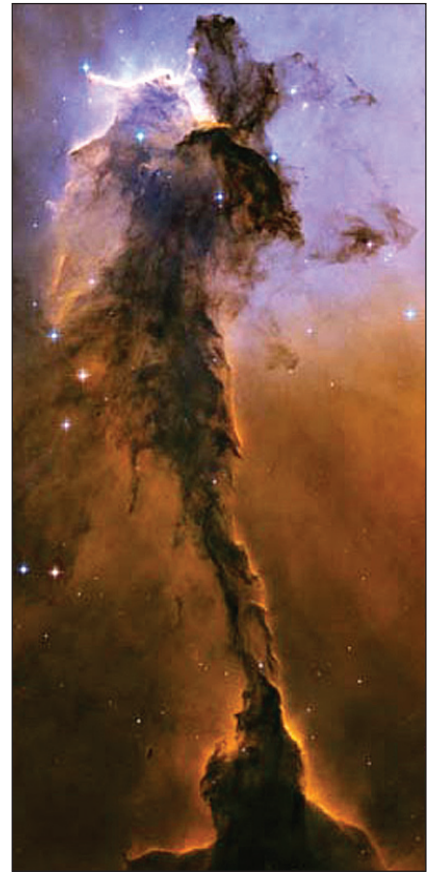
Introduction. Proclamation of 2009 as International Year of Astronomy. UNESCO General Conference, 33rd Session. Paris 2005.

"Persons belonging to future generations have the right to an uncontaminated and undamaged Earth, including pure skies; they are entitled to its enjoyment as the ground of human history of culture and social bonds that make each generation and individual a member of one human family."

Universal Declaration of Human Rights for Future Generations. Art.1. UNESCO, La Laguna, 1994.

astronomy has marked the history of science and man's cultural perception of the world. Many of these manifestations enhance the identity of peoples and cultures, and one must not forget that they now also form the foundation and attractions for developing tourism in many destinations in the world. This is the case of the island of La Palma, declared a UNESCO Biosphere Reserve, where astronomy and astrophysical observation represent one of the main scientific, cultural and tourist assets of the island.

Only a few years ago we started understanding that the clarity of the sky has also a decisive impact on the conservation of biological diversity and on natural ecosystems. We usually forget that over half the creatures living on Earth are nocturnal. Any degradation in the quality of the skies, both by day and by night, will gradually have an unpredictable effect on the equilibrium of biosphere.

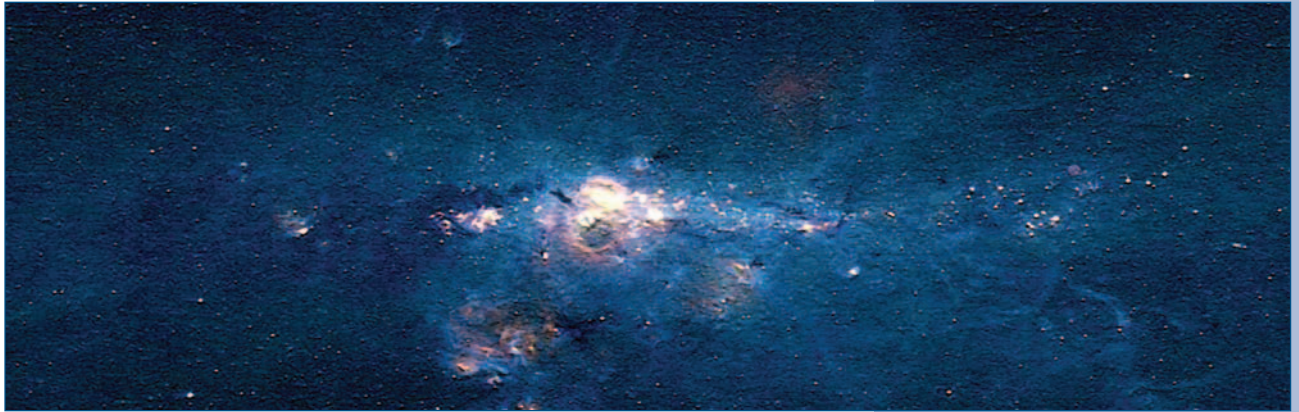


The right to observe the stars and to a clean sky go beyond merely guaranteeing one aspect of scientific development and people's enjoyment, as it also involves a commitment to conserving the environment and the chance to enjoy the technological, economic and cultural benefits that this constantly provide. When all is said and done, it is also a commitment to future generations.



THE INITIATIVE

This initiative is designed as an international campaign in defence of the quality of the night skies and the general right to observe the stars, open to the participation of all scientific, cultural and citizens' associations and institutions related to the defence of the firmament.



It seeks to strengthen the importance of clean skies for mankind, emphasizing and introducing the value of this endangered heritage for science, education, culture, tourism and, obviously, as a quality-of-life factor. An important aspect of this initiative would therefore be to help disseminating technological, economical and cultural benefits, both direct and indirect ones, associated to star observation.

The initiative will be launched at the International Conference in Defence of the Quality of the Night Skies and the Right to Observe the Stars, to be held on La Palma (Canary Islands, Spain) in April 2007. The World Declaration on the Right to the Starlight will be a basic aim of this meeting, expressing the commitment to protect this common heritage of mankind.

Why La Palma?

- The Roque de Los Muchachos Observatory, one of the biggest assemblies of telescopes in the world, is located on La Palma.

- La Palma, has been declared a Biosphere Reserve by UNESCO. Biosphere Reserves are conceived as world-wide laboratories for developing science, protecting natural resources (which could include the sky for the first time) and for sustainable development. From the moment of its declaration La Palma, supported by the World Network of Biosphere Reserves, bet on the promotion of areas where starlight is protected throughout the world.



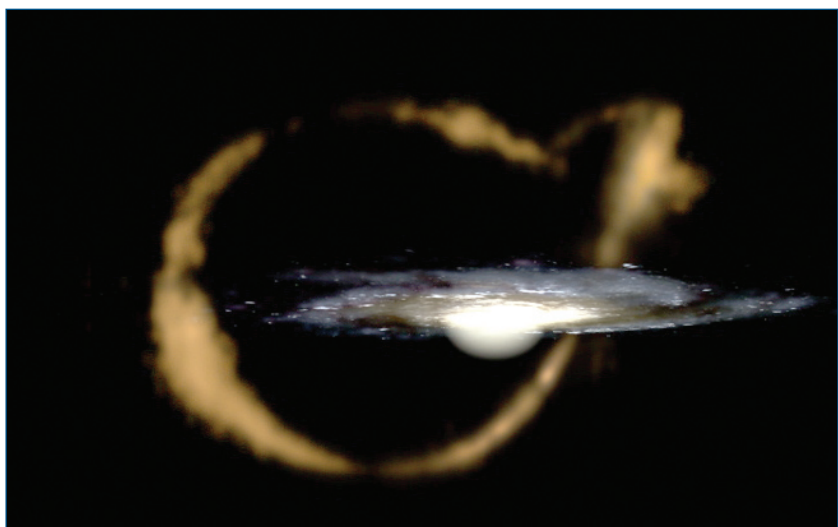
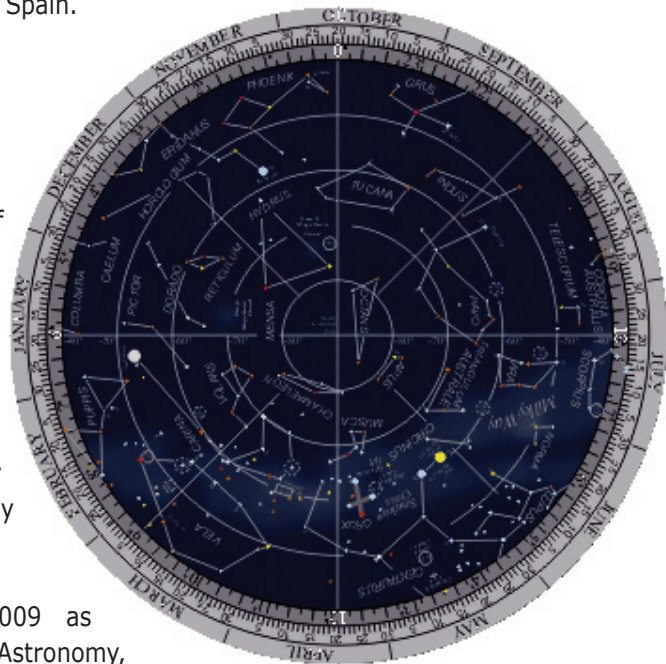
- La Palma is one of the pioneer areas in the world where a Sky Act has been enforced. In fact, 18 years ago Spain enacted specific legislation aimed at protecting the sky for astrophysical observations, recognising its enormous value as a pioneering step on a global scale. It is the "Protection of Astronomic Quality of the Observatories of the Canary Island Institute of Astrophysics Act", Law 31/1988, of the 31st of October.

- The Gran Telescopio CANARIAS (GTC) is being built on La Palma, and will come into service in 2007. Its specifications will make it the largest and most advanced telescope in the world. This is the first "grand science" project led by and located in Spain.

Background and opportunities of future

- The Declaration of Human Rights for Future Generations, drafted in La Laguna (Tenerife, Canary Islands) in 1994 at the UNESCO-Cousteau Team Meeting of Experts held in 1994, advocates the right for future generations to enjoy pure skies.

- The designation of 2009 as International Year of Astronomy, coinciding with the 400th anniversary of Galileo Galilei's first telescope, already approved by the Executive Committee of UNESCO in August 2005, will be put to the General Assembly of the United Nations in autumn 2006. This designation will make it possible to work with the reference of International Year of Astronomy as the final framework for disseminating the achievements accomplished in this initiative.

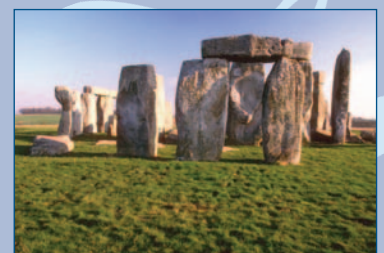




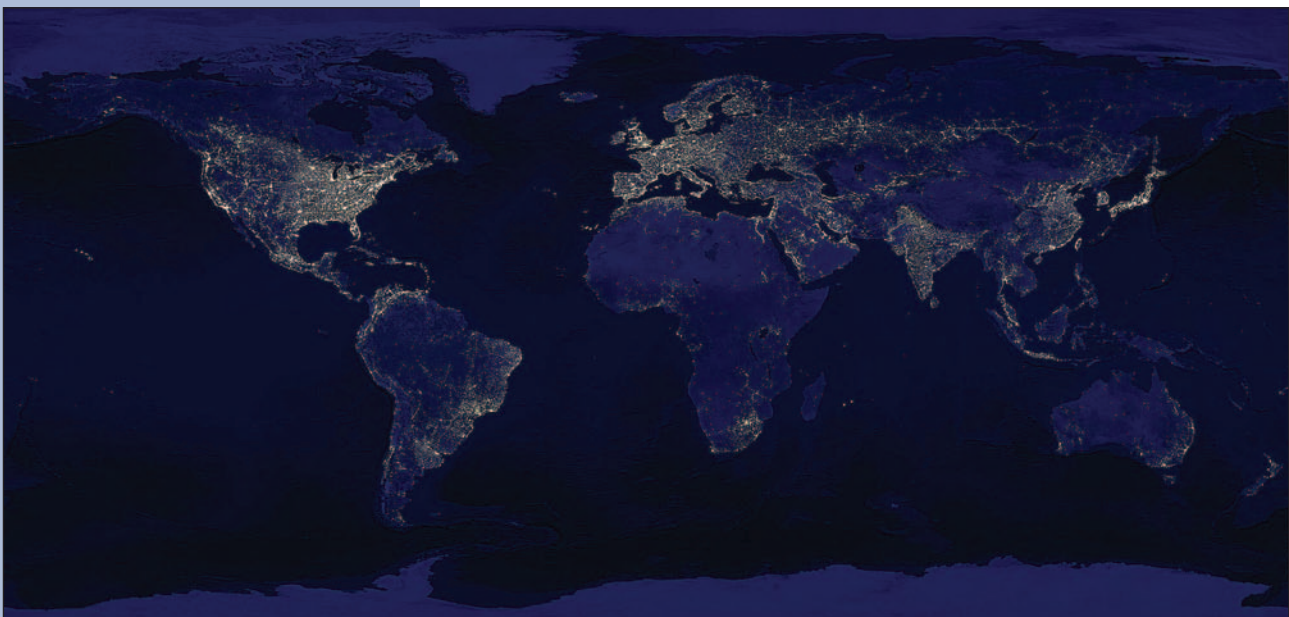
OBJECTIVES

PRESERVE AND RESTORE THE VISUAL SPACE THAT ENABLES US TO ACCESS THE STARLIGHT

- Promote the **World Declaration on the Right to the Starlight** as a common heritage of mankind.
- Promote international action in defence of the quality of the night sky and the observation of the stars, reinforcing the right to their enjoyment and use as a scientific, cultural and environmental resource and a vector of technological development to the benefit of mankind.
- Help to spread the culture of valuing starlight, guaranteeing access to it for present and future generations.
- Make an international call on the need to limit impacts on the quality of observing the sky associated with light, radio-electric and air pollution, including the impact of air traffic, in the areas of astrophysical observation.
- Promote public awareness of the personal right to contemplate the stars and to the conservation of nocturnal landscapes.
- Identify and promote initiatives to enhance the value of material and intangible cultural heritage associated with astronomy, hence reinforcing our knowledge of the skies and of the associated cultural expression diversity.
- Open a window on the new forms of sustainable and creative tourism promoting starlight and the firmament as basic resources in responsible tourism destinations, with special emphasis on actions taken in mankind heritage sites, biosphere reserves and areas of astrophysical observation.



- Generate proposals aimed at the protection of night sky quality, promoting the creation of privileged areas for star observation and launching international campaigns and agreements aimed at consolidating genuine "Starlight Reserves" as windows to the firmament.
- Promote the concept of Starlight Reserves in protected natural areas and surrounding zones, as an element of the strategy to conserve biodiversity and the manifestations of night life: "life manifests itself 24 hours a day".
- Develop the clean skies initiative within the framework of UNESCO's World Network of Biosphere Reserves, as they are laboratories for science and sustainable development and they can act as worldwide benchmarks for enhancing the value of environmental resources.
- Develop the proposal to create an international network of institutions and bodies supporting the quality of the light of the night sky and the right to observe the stars.
- Identify, disseminate and promote local, national and international legislative initiatives aimed at protecting this legacy for science, development and culture.
- Help to disseminate the benefits associated with the development of astrophysics and observatories, in the technological and industrial dimensions and in the area of job creation and the influence they have on the advancement of other socially interesting applications.





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INTERNATIONAL AND LOCAL REFERENCE ACTIONS

The Starlight initiative picks up the legacy of several experiences, either accomplished or in progress, in defence of the night sky all over the world.

- International associations and initiatives in defence of the night sky, such as: International Dark-Sky Association, British Astronomical Association's Campaign for Dark Skies, etc.
- "Light Pollution and the Protection of the night environment" conference and declaration, held in Venice in 2002. International Symposium on light pollution (Barcelona 2004).
- Astronomy and World Heritage Project, launched by UNESCO in 2003. This promotes the creation of a network based on the Astronomy related mankind heritage sites, as a whole.
- Development of tourist/educational astronomy routes such as: Chilean Astronomy Route or the "Venezia: Salvare la Notte" initiative.
- Local and national legislation, by-laws and regulations: Cordova By-law protecting the night sky, Emissions Standard for Regulating Light Pollution (CONAMA-Chile), "Hawaii County Lighting Code", "Colorado Lighting Regulations", Czech Air Protection and light Pollution Act, the Lombardy experience, Protection of the night sky in Agenda 21 in Somerset County, Save the Night – the Venice Convention, the New Mexico Night Sky Protection Act, etc.
- Appearance of the first protected areas, classed as Dark Sky Reserves: Torrance Barrens Dark Sky Reserve (Ontario, Canada), National Dark Sky Sanctuary (South Africa), Potawatomi Nature Reserve (Indiana, USA), La Verendrye Wildlife Reserve (Canada), La Palma Biosphere Reserve.



THEMATIC AREAS OF THE CONFERENCE

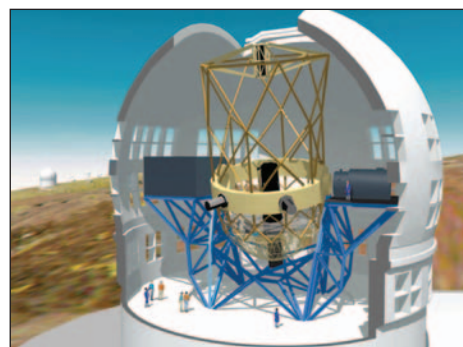
The scientific dimension.

A dark sky for the development of astrophysics.

- The importance and scope of astrophysics research.
- The parameters of night sky quality for astrophysical observation.
- Effects of light pollution.
- Effects of radio-electric pollution.
- Effects of air pollution.
- Characterisation of "sky reserves" for astrophysical research.

Benefits that go beyond the frontiers of astrophysics.

- Benefits for industrial and technological development.
- Astrophysics, technological innovation and social benefits.
- Opening up new frontiers for science, economy, culture and cooperation for peace.



Climate change, Kyoto Protocol, renewables and quality of the sky.

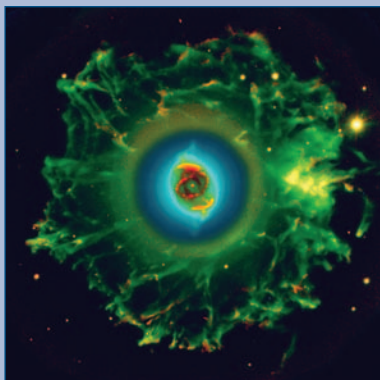
- Energy efficiency and intelligent lighting.
- For a lighting culture that does not mask the starlight.
- Emissions and quality of the sky.
- New technologies for clean skies.
- Best practices in lighting techniques and emission reduction.
- Clean energy and transport for a star-studded sky.

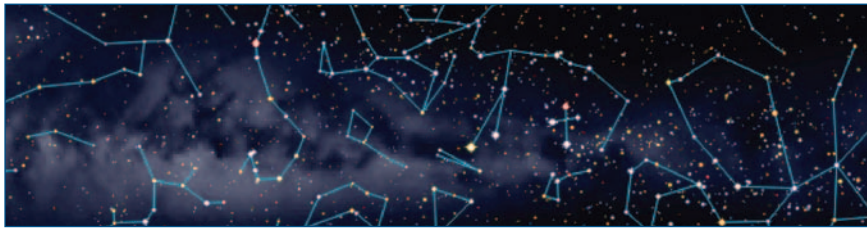
The environmental dimension

- Benefits and risks for the environment.
- Starlight and the conservation of biological diversity.
- Nocturnal landscapes.
- Ecology of the night.

The cultural and educational dimension.

- Enhancing the value of the world astronomic cultural heritage.





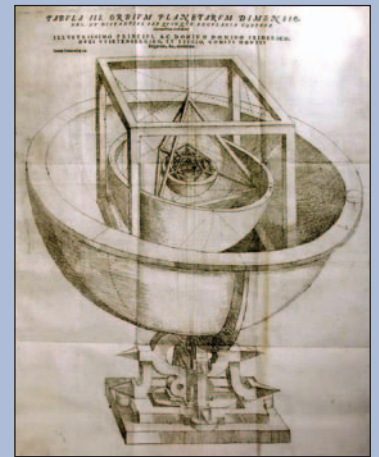
- The importance of astronomy in the history of science.
- Astronomy, cultural diversity and a culture of peace.
- The benefits of acquiring knowledge of the Universe.

The night sky, source of inspiration.

- The night skies in painting and photography.
- Music of the stars.
- The influence in the literature.
- Stars in the scenic arts.
- Oral and intangible heritage.

The right to starlight.

- Legislative and regulatory initiatives: codes, regulations and laws.
- International agreements and conventions. Framework and possibilities.
- The quality of the skies and the energy directives.
- The right to the nocturnal landscapes.
- Consolidating the "windows on the universe" as a right of mankind.



Star tourism.

- The astronomic cultural heritage as a tourist resource.
- Astrophysics observatories and knowledge tourism.
- Sustainable tourist destinations and clean skies.
- Silence and starlight: tourism in the deserts.
- Star routes.

Starlight Reserves.

- Identification and promotion of an international network of Starlight Reserves.
- Biosphere Reserves and World Heritage Sites as Starlight Reserve laboratories.

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Promoters:



La Palma
Biosphere Reserve



Instituto de Astrofísica
de Canarias



Gobierno de Canarias



Ministerio
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