

# Welcome address

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Mr Chairman,

Distinguished guests,

Ladies and Gentlemen,

It is a great pleasure for me to open the IAU-UNESCO Symposium on *The Role of Astronomy in Society and Culture* which is taking place at the UNESCO Headquarters this week.

Last week, on Thursday and Friday, IAU and UNESCO organised a very successful opening ceremony of the International Year of Astronomy. Our Director-General, Mr Matsuura Koïchiro, reminded the audience that UNESCO started its cooperation with IAU in the preparation of the IYA in 2005 when the UNESCO Member States decided to recommend to the United Nations that it declares 2009 as the international year as proposed by Italy and co-sponsored by Brazil, France Japan and the United Kingdom. In 2007, the UN General Assembly, in turn, designated UNESCO as the lead agency in the UN System in recognition of our experience in two fields: in science education and in establishing the link between the astronomical sciences and culture. We are determined to work very closely with the IAU and related partners to make this Year a success. The Director-General announced that Mr Jean-Michel Jarre, UNESCO Goodwill Ambassador accepted to take on the special responsibility for ensuring that throughout the Year, many events will be organized in order to bring culture and science together to enable a sustained lively interest in the Year by the general public. Mr Jarre stressed the natural link between the work of scientists and artistic expression. On Friday evening of last week, we had already a very successful demonstration of a science-inspired cultural event namely *The Sun Rings* performed by the Kronos Quartet with the UNESCO choir. Mr Jarre informed us that he plans in the coming months – around August– to organise in Spain a major event bringing music and celestial observation.

The Opening Ceremony last week gave us a unique opportunity to hear the views of high-level ministerial policy-makers from countries actively supporting the Year. It was most encouraging to listen to the strong positive messages of support to science by decision-makers. It was clearly stated that we are living a golden age for science and celebrating the *Annus Mirabilis* of Astronomy. There is a clear political consensus on the importance of the success of the scientific method analysing fundamental questions asked by our modern complex knowledge-based society. Astronomy and cosmology revealed to us in a most unexpected way the evolution of the universe that over the last 13.7 billion years became “fertile” and led us to the necessary conditions to see the birth of life and the development of our conscience. Decision-makers underlined the importance of international cooperation in astronomy in order to stimulate its scientific development and to guarantee further expansion of its impressive observational infrastructure. They

see astronomy as an important element in re-launching the engine for new economic development by stimulating science and technology. This should give us hope in building up a better future for generations to come. The industrialists present last week also stressed the need to build new partnership with the scientific and policy-making communities to combine efficiently intellectual capacity and the necessary resources to promote innovation to prompt fundamental and applied research and to build a highly motivated workforce.

All the speakers stressed the need to launch a major investment in education to stop young people from abandoning science and technology as study subjects and turn to careers that are perceived to be more rewarding. Therefore, we are very pleased that through our cooperation with the International Astronomical Union, we can convey the excitement of personal discovery, the pleasure in sharing fundamental knowledge about the Universe and the realisation of human's place in it. Astronomy is one of the oldest scientific pursuits of humanity and is making fundamental contributions towards contemporary technological, social and economic development. Therefore, a better understanding of the origins and functioning of the universe will lead us to a better comprehension of the planet and to a more sustainable development of the Earth system and its resources. This inspirational aspect of IYA embodies an invaluable resource for humanity and contributes in the achievement of the goal of universal primary education.

The IYA educational programme intends to add quality to primary education by providing teachers and students access to basic astronomy studies worldwide, giving equal chances globally to access knowledge will result in the development of international cooperation with scientific research and relevant applications, and its broader effect will be to assist the developing world to match the western world. Through Space Education Programme, UNESCO brings a new dimension to science education by introducing new knowledge, values and perspectives on our planet and the universe. The programme enhances space subjects and disciplines in schools and universities in developing countries through international workshops for teachers and students and by introducing space-related subjects in their curricula.

Science and Education Programme is closely working with UNESCO Basic Sciences Programme that encompasses physics and astrophysics, and leads to strengthen education at university level, and strongly stimulates North-South and South-South cooperation. UNESCO was the basis for the creation of CERN where the scientific community works towards a better understanding of the origins of the universe and its expansion, and on the study of dark matter. In a similar way, UNESCO is closely associated to the creation in November last year of the Pierre Auger Observatory in Malargüe, Province of Mendoza, Argentina, where scientists from all over the world explore the mysteries of high-energy cosmic rays.

One of our goals in IYA is to improve the gender-balance representation of scientists at all levels and greater involvement of under-represented minorities in scientific and engineering careers. Gender equality is a priority concern of the whole scientific community regardless of its geographical location. The problems and difficulties are dissimilar in different regions and continents. We have created partnerships with the private sector to address this issue where I would like to mention the l'Oréal Prize for "*Women in Science*" which has rewarded exemplary women scientists in fields related to astronomy, and has helped young women in starting their research careers.

Ladies and gentlemen, I would briefly like to mention that the thematic sessions we held last week in the opening ceremony were also very relevant to the debates that will take place in this week's symposium. We learned more about the history of astronomy and the important developments taking place in diverse cultural environments all over the

world. We heard several speakers alluding to the important contributions made by people with different cultural backgrounds, speaking different languages and pursuing different objectives, some focussing more on basic sciences, others on evolutionary scenarios. From the beginning of mankind people have been exploring time and used the study of the sky to develop calendars that have helped them in planning their economic activities and in achieving food security. Many civilisations developed mythical, metaphysical and religious diversities linked to astronomy.

In this respect, I would briefly like to refer to a programme created by our *World Heritage Centre* and implemented in close collaboration with IAU. This project on *Astronomy and World Heritage* aims at establishing a link between science and culture to highlight the cultural and scientific values of properties and monuments connected with astronomy.

My review of the presentations and discussions held during the opening ceremony shows you that the thematic of this week's symposium on the *Role of Astronomy in Society and Culture* was already briefly evoked and that we look forward to more in-depth discussions these coming days. In addition, I would like to mention that the international press agencies expressed a great interest in IYA. The press coverage on radio and on television is very encouraging. During the press conference at UNESCO, many questions were raised especially on this link between astronomy and society.

May I express my appreciation for the excellent work of the organising committee and in particular to Dr David Valls-Gabaud for having put together an excellent interdisciplinary programme covering basic sciences, social science, education and culture.

I would also like to thank all the speakers and participants for being with us. I hope that during your work, you will find time to visit the exhibits related to astronomy and arts in the neighbouring rooms and I wish you every success in your deliberations.

We would like to invite you to visit us here again in June for conferences on the *Invisible Universe* and in July on *General Relativity*, as well as in December on *Space and Astronomy*. With our Member States, we have organised several events in different part of the world†

Ladies and gentlemen, in closing, let us recall that the universe is not only more amazing than we imagine it is, it is more amazing than we are even able to imagine it to be.

Thank you.

† Please visit our website for more information at [www.astronomy2009.org](http://www.astronomy2009.org) and [www.unesco.org/iya2009](http://www.unesco.org/iya2009).