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Date
2015-01-27

Document Type
Travel report from IYL-2015-Ceremony

Opening Ceremony of the International Year of Light

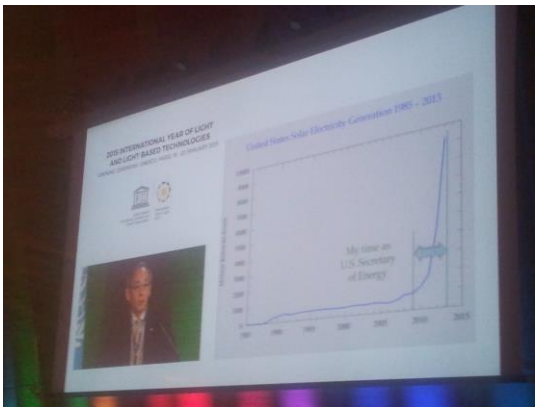
UNESCO Headquarters, Paris, 19th and 20th of January 2015

Notes: P-Y Fonjallaz

The event gathered more than 1000 persons and had a very rich programme (see next pages) with not less than 5 presentations by Nobel laureates. A little exhibition was also organized beside the conference. The event was a large success in my opinion with outstanding presentations, especially from Steven Chu (Nobel laureate 1997), Alessandro Farini (CNR, presentation about art and light) and William Philips (Nobel laureate in 1997 as well, together with Cohen-Tannoudji who surprisingly was not present). The conference suffered a bit from "political" talks and just normal talks without anything special which, in comparison with the best presentations, appeared rather insipid. A number of countries, especially developing ones, have supported the organisation of IYL-2015 and had all to say their satisfaction and gratitude. Ziad Aldrees, ambassador of the Kingdom of Saudi Arabia to UNESCO told us the story that his country could not accept the IYL if Alhazen was not recognised as the first scientist who contributed to the development of optics. Alhazen (complete name was Ibn Al-Haytham) was emprisoned from 1011 to 1021 and would have, according to the legend, written his book about optics during that time. The point made by Saudi Arabia has been accepted unanimously by the committee of UNESCO (with the cover of the legend, the book is now "dated" from 1015). A special exhibition about Alhazen (1001 Inventions) was also possible to visit (I have transported a complete book about it, if anyone is interested).

Highlights from the presentations (see also ICTP):

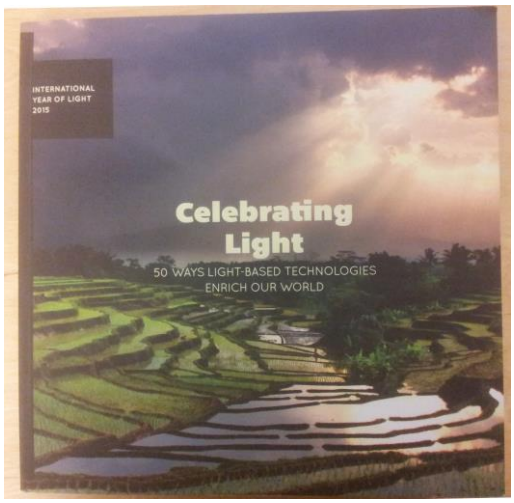
- Steven Chu: one highlight was his graph showing the solar electricity in the US as a function of time. Despite the bad quality you might see the legend "my time as US secretary of energy".
- William Philips made a number of experiments using a lot of liquid nitrogen, e.g. letting a closed bottle filled with liquid N2 explode under an ink. Or pouring down liquid N2 on the floor which reached the audience. The point was to explain how cold is a few nK. A funny performance.
- A number of presentations showing how innovative solutions using light-based technologies can have dramatic impact in solving problems in developing countries: One dollar glasses fabricated on-site with a machine bending metal threads and combinations of solar cells and LEDs to let pupils study after the sunset

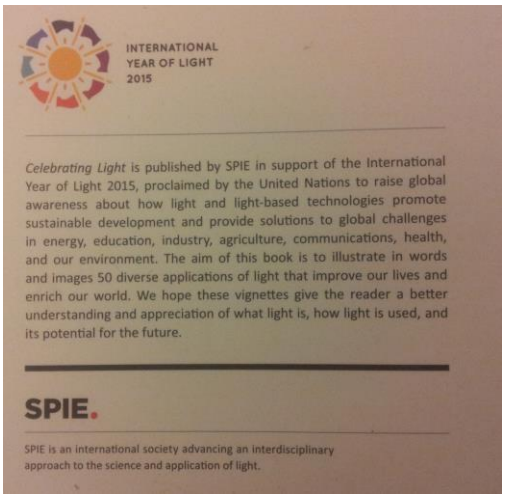


Picture from Douglas Hofstadter that Serge Haroche showed.

Material collected:

- The event started with a nice video (more artistic than instructive though), the official trailer of IYL-2015: https://vimeo.com/117005227
- SPIE distributed to all attendees a book entitled "Celebrating Light, 50 ways light-based technologies enrich our World". Pretty good gathering of how light contributes to mankind's well-being. It would be nice to see a video based on the same model (or get hold of a ppt… or make one).





- They also presented the film "Einstein's Light" by Nickolas Barris with its Trailer. The film explores how scientific imagination and innovation advance knowledge frontiers using the two models, Einstein and Henrik Lorentz.
- My hope was to get many hints about presentation material, but it was not as much as expected at the end. A lot can be in fact be found on the official website of IYL-2015, under "Resources", e.g.:
    - Videos:
        - Losing the dark. (about light pollution)
        - SPIE's celebrate with us (1 min video made by SPIE)
        - EPIC's video about photonics (7 min)
    - Links:
        - The page "Hands On Involvement" is gold mine. I recommend especially "Optical Illusions".
    - Posters: (I think PhotonicSweden should print a few of these in A3 for different occasions).
        - http://www.magic-of-light.org/iyl2015/download.php

Exhibition:

- Light Painted World: Art involving light. Several paintings were presented on several screens in the exhibition.
- A Liter of Light:(video) Low cost solutions to improve life of poor people, e.g. plastic water filled with diffuser (salts) put through the roofs of favelas.
- ICTP, International Centre for Theoretical Physics: Instrumental for the organization of IYL-2015. Founded in 1964 by the late Nobel Laureate Abdus Salam, ICTP seeks to accomplish its mandate by providing scientists from developing countries with the continuing education and skills that they need to enjoy long and productive careers. ICTP has been a major force in stemming the scientific brain drain from the developing world.

Some persons met: Ann-Marie Pendrill of course, Dave Payne, Roberta Ramponi, Carlos Lee, Bart van Caenegem (Photonics Unit), Nadja Just (coordinator of Photonics4All), Katharina Flaig (VDI/Photonics), Katarina and Sune Svanberg, Min Qiu, Perry Ping Shum from NTU in Singapore, Philip Russel, Ben Eggleton from CUDIS in Sydney.

Programme:

Opening Ceremony of the International Year of Light

Date: January 19, 2015 - January 20, 2015

Location: Paris, France

Day 1 - 19 January 2015

Registration 08.30 – 10.00

Morning Session 10.00 – 12.00

Welcome and Inauguration

High-Level Session with Welcome Addresses by UN and UNESCO Representatives and Member States and other Dignitaries.

Ban Ki Moon (Video-Message), Secretary-General, United Nations

Irina Bokova, Director-General, UNESCO

Flavia Schlegel, Assistant Director-General for Natural Sciences, UNESCO

Jane Naana Opoku Agyemang, Minister for Education, Ghana

Enrique Cabrero, Director-General of CONACYT, Mexico

Ziad Aldrees, Ambassador and Permanent Delegate of the Kingdom of Saudi Arabia to UNESCO

Rolf-Dieter Heuer, Director-General, CERN

Ligia Noronha, Director of the Division of Technology, Industry and Economics, UNEP

Overview

The Chairman of the International Year of Light Steering Committee will provide a brief overview of the objectives and themes of the year, the anniversaries to be celebrated, and a description of all major actions and programmes to be implemented.

John Dudley, Chairman of the IYL2015 Steering Committee

Plenary Lecture - Light and Life

Ahmed Zewail, the Linus Pauling Chair professor of chemistry and professor of physics at the California Institute of Technology (Caltech, USA). A pioneer of femtoscience, Ahmed Zewail is also a member of the Scientific Advisory Board established by the United Nations Secretary-General.

Inauguration of the 1001 Inventions and the World of Ibn Al-Haytham Campaign

1001 Inventions and the World of Ibn Al-Haytham is an international educational campaign celebrating the 11th century pioneer Ibn Al-Haytham. Ibn Al-Haytham's seminal Kitab al-

Manazir (Book of Optics) was written around 1015, and its 1000th anniversary is listed in the United Nations resolution as a focal point of celebration of the International Year of Light. After abrief overview of the campaign from the podium, the audience will be invited to attend a display highlighting parts of the campaign in the adjacent Hall Ségur.

Ahmed Salim, Producer and Director 1001 Inventions

Afternoon Session 14.00 – 18.00
Plenary Lecture – Energy and Climate Change: Challenges and Opportunities
Steven Chu, Nobel Laureate, William R. Kenan, Jr. Professor of Humanities & Sciences and Professor of Molecular and Cellular Physiology at Stanford University. From January 2009 until April 2013, Professor Chu was the 12th U.S. Secretary of Energy; during his tenure, he began ARPA-E, the Energy Innovation Hubs and the Clean Energy Ministerial meetings.

Thematic Session – The International Community of Light and Light-based Technology
Short messages from members of the global scientific community will reinforce the diversity and international nature of the planned events during 2015.

Eric Rondolat, CEO of Lighting Sector, Royal Philips (Netherlands).

Jean-Luc Beylat, President of Alcatel-Lucent Bell Labs (France).

France Cordova ,Director, National Science Foundation (USA).

Francis Allotey, African Physical Society & IUPAP Vice President at Large (Ghana).

Zohra Ben Lakhdar, l'Oreal-UNESCO Prize Recipient for Africa & Arab world 2005 (Tunisia).

Ana-Maria Cetto, Institute of Physics, National University of Mexico (UNAM) (Mexico).

Thierry Montmerle, International Astronomical Union IAU, Paris (France).

Danielle Harper, International Association Of Physics Students IAPS (United Kingdom).

Thematic Session – Lighting the Future
Short presentations addressing issues of lighting and challenges for the future, to be followed by panel discussion.

Ann Webb, President of the International Commission on Illumination, Facilitator (United Kingdom).

Gustavo Avilés, Lightteam (Mexico).

Harry Verhaar, President of the Global Off-Grid Lighting Association (Netherlands).

Sze-leung Cheung, IAU International Outreach Coordinator (Japan / Hong Kong SAR, China).

Barbara Horton, President of IALD (USA).

Thematic Session – Light for Humanity and Culture
Short presentations addressing the many ways in which light influences human culture and our perception of the universe.

Gianfranco Cardinal Ravasi, President of the Pontifical Council for Culture (Vatican).

Alessandro Farini, CNR-National Institute of Optics and University of Florence (Italy).

Charles Falco, University of Arizona (USA).

Musical and Cultural Interludes will also be included in Day 1.

Day 2 - 20 January 2015
Registration 08.30 – 9.00
Morning Session 9.00 – 12.25
Plenary Lecture – Einstein, Light, and Time
William Phillips, Nobel Laureate, Fellow of the Joint Quantum Institute (JQI), a cooperative endeavor of the National Institute of Standards and Technology (NIST) and the University of Maryland (USA)

Thematic Session - Light on Development
Short presentations followed by discussion from speakers addressing issues of how light science and technology can impact on areas relevant to development worldwide.

Andrew Forbes, CSIR National Laser Centre, (South Africa).

Yanne Chembo, ERC Starting Grant Laureate (Cameroon / France).

Thanh-Nga Thrin Tran, Vietnam Vascular Anomalies Center (Vietnam, USA), Harvard Medical School (Boston, USA).

Sudhanshu Sarronwala, Earth Hour, World Wide Fund for Nature (WWF).

Plenary Lecture – Light and the Quantum
Serge Haroche Nobel Laureate, Professor at Collège de France and Holder of the Chair of Quantum Physics (France).

Thematic Session – Light at the Limits
This session will include speakers covering topics at the frontiers of optical science.

Gérard Mourou, IZEST, École Polytechnique (France).

Norio Kaifu, President of the International Astronomical Union (Japan).

Catarina Biscari, ALBA Synchrotron and lightsources.org (Italy, Spain).

Afternoon Session 14.00 – 18.00

Plenary Lecture – Efficient Light Conversion and Generation
Zhores Alferov, Nobel Laureate, Rector of the St. Petersburg Academical University, Research and Educational Center of Nanotechnologies of the Russian Academy of Sciences.

Thematic Session – The Future of Light
This session will include speakers covering topics at the frontiers of optical science.

Alain Aspect, UNESCO Niels Bohr Medal laureate (France).

Bernard Kress, Google [X] Labs (USA)

Brian Wilson, University Health Network Biophotonics (Canada).

Sune Svanberg Former Chairman of the Nobel Committee for Physics, (Sweden)

Thematic Session – Light Solutions
This session will see speakers address how innovative (and sometimes very simple) solutions using light-based technologies can have dramatic impact in solving problems in developing countries.

Illac Diaz, LiterofLight and MyShelter Foundation (Philippines).

Martin Aufmuth, OneDollarGlasses (Germany)

Linda Wamune, SunnyMoney and SolarAid (Kenya).

Thematic Session – Science Policy
This will be a high-level session with speakers from the UNESCO and UN systems and Science Policy experts from around the world speaking to issues such as: effective science advice to governments, how the North can help South in human capacity building, and the impact of photonics on global economic development.

José Mariano Gago, Former Minister of Science, Technology and Innovation (Portugal).

Naledi Pandor, Minister of Science and Technology (South Africa).

Ana María Cetto, Institute of Physics, National University of Mexico (UNAM) (Mexico).

Khalil Rouhana, Directorate General Communications Networks, Content and Technology, European Commission (France).

Maciej Nalecz, Director of the Division of Science Policy and Capacity Building, UNESCO.

Closing Remarks