

REPORT ON THE WORLD YEAR OF PHYSICS 2005 UNIVERSITY OF BARCELONA

The academic activities programmed by the Universitat de Barcelona (UB) to celebrate the World Year of Physics were carried, unless otherwise stated, at the Physics Building facilities. They can be classified into different areas:

1. Physics and education.

Meetings between Physics professors from different universities around our country to exchange experiences on the use of new technologies on Physics education, as well as introductory Physics classes and labs addressed to High School Students.

2. Physics and knowledge.

Series of conferences, panels, and debates on different aspects of modern Physics and its relationship to other sciences. Addressed to Physics' students and researchers.

3. Physics and society.

Dialogs, films, exhibits, and outdoors activities intended to bring the excitement of Physics to other members of the academia and the general public. It shows the impact of Physics on thinking, arts, and everyday life.

PROGRAM OF ACTIVITIES BY AREA

PHYSICS AND EDUCATION

- **Meeting on innovation, simulation and internet for Physics education**

Organized by: Grup d'Innovació Docent en Òptica Física i Fotònica, Dept. de Física Aplicada i Òptica.

Thursday, January 13th, 2005 (9h to 17h) and Friday, January 14th, 2005 (9h to 14h)

- **Journées of Physics' Experiments**

A full day of lab experiments for groups of High School Students

From January 24th to February 4th, 2005

- **European Masterclass: "Hands on Particle Physics"**

Organized by: Joan Soto, Dept. d'Estructura i Constituents de la Matèria

Friday, March 11th, 2005 (9h to 18h)

- **"Astrophysics: Exploring the Universe"**

A one-day session of scientific documentaries followed by a debate focused on Astrophysics and Space Science held within the 10th edition of the Science Week in Catalonia.

Organized by: Institut de Ciències de l'Educació (ICE), Vicerektorats de Recerca i de Política Científica, Facultat de Física, and Unitat d'Audiovisuals.

November 16th, 2005

Documentaries:

– "Living with the risk", produced by Mercuri SGP and TV of Catalonia.



- “Astronomy: exploring the universe”, produced by Mercuri SGP and TV of Catalonia.
- “Hubble, 15 years of discoveries”, produced by the European Space Agency.

Debate: "Astrophysics: Exploring the Universe"

Participants:

Eduard Salvador (coordinator), Dept. d'Astronomia i Meteorologia

Josep Maria Paredes, Dept. d'Astronomia i Meteorologia

Jordi Portell, Dept. d'Astronomia i Meteorologia and coordinator for

Catalonia of the SETI@Home project.

PHYSICS AND KNOWLEDGE

- **Series CLOSE ENCOUNTERS WITH THE THIRD CYCLE**

Conferences addressed to graduate Physics' students.

Organized by: Oliver Carrillo, Marc Echeгойen, Jordi Mur, and Arnau Rios, PhD students of Physics.

- **Spring sessions: “Einstein Reloaded”**

Conference: "1905: Einstein and his Annus Mirabilis"

Emma Sallent, Dept. de Física Fonamental

February 24th, 2005

Conference: "1917-2005: Abstraction meets Reality"

Encarni Pleguezuelos and Marc Echeгойen, Dept. de Física Aplicada i Òptica

March 17th, 2005

Conference: "1905-2005: from brownian movement to biophysics"

Manel Naspreda, Dept. de Física Fonamental

April 7th, 2005

Conference: "1925-1995: a recipe cooked by inches"

Jordi Mur, Dept. d'Estructura i Constituents de la Matèria

April 21st, 2005

Conference: "1905-2005: From general relativity to Science from Space"

Guillem Anglada, Dept. d'Astronomia i Meteorologia

May 5th, 2005

Debate: "Einstein on the 21st Century"

Participants:

J.M. Fernández, Dept. d'Estructura i Constituents de la Matèria

L. Navarro, Dept. de Física Fonamental

J.M. Parra, Dept. de Física Fonamental

E. Salvador, Dept. d'Astronomia i Meteorologia

J. Samitier, Dept. d'Electrònica

May 19th, 2005

- **Fall sessions: “The frontiers of Physics”**

Conference: "The frontier between Physics and Biology"

Raimon Sunyer, Unitat de Biofísica i Bioenginyeria, Facultat de Medicina, Hospital Clínic

November 10th, 2005

Conference: "The frontier between Physics Chemistry"

Carina Arasa, Dept. de Química Física, Facultat de Química

November 17th, 2005

Conference: "The frontier between Physics and Mathematics"
Diego Blas, Departament de Física Fonamental
November 24th, 2005

Conference: "The frontier between Physics and Computation"
José A. Rodríguez, Centre de Visió per Computador, Universitat
Autònoma de Barcelona
December 1st, 2005

Conference: "The frontier between Physics and Technology"
Ferran Fernández i Zeus Martí, ALBA Laboratori de Llum Sincrotó, Universitat Autònoma de
Barcelona
December 15th, 2005

- **Series EINSTEIN 1905-2005: ONE HUNDRED YEARS OF MODERN PHYSICS**
Conferences about Einstein's work open to the entire college community.
Organized by: The Dean of Physics

Einstein 1905-2005: cent anys de Física moderna
Cicle de conferències organitzat per la Facultat de Física de la Universitat de Barcelona, amb el suport de l'Any Mundial de la Física. Les conferències, que són obertes a tota la comunitat estudiantil, tindràn lloc els dies especificats en el programa a partir de les 11.30h, de martí i Avui! Miquel del realitzador de Física Química.

Programa

- Dimecres, 29 de setembre
"Einstein 1905: creativitat en acció"
L. Navarro
moderador: J. Blas
- Dimecres, 6 d'octubre
"Einstein i física estadística: el desenvolupament de la termodinàmica"
M.A. Garcia-Bach
moderador: J. Blas
- Dimecres, 13 d'octubre
"Transport i difusió: 100 anys de progrés"
J.M. Sancho
moderador: J. Blas
- Dimecres, 20 d'octubre
"Einstein, gravitació i cosmologia"
Eduard Salvador
moderador: J. Blas
- Dimecres, 27 d'octubre
"Einstein i el temps"
J.L. Llosa
moderador: J. Blas

Logo: Einstein 1905-2005
Facultat de Física
Universitat Autònoma de Barcelona

Conference: "Einstein 1905: creativity in action"
L. Navarro, Dept. de Física Fonamental
Thursday, September 29th, 2005

Conference: "The photoelectric effect and photoemission. Its repercussions on solid state Physics"
M.A. Garcia-Bach, Dept. de Física Fonamental
Thursday, October 6th, 2005

Conference: "Transport and diffusion: 100 years afterwards"
J.M. Sancho, Dept. d'Estructura i Constituents de la Matèria
Thursday, October 13th, 2005

Conference: "Einstein, gravitation and cosmology"
Eduard Salvador, Dept. d'Astronomia i Meteorologia
Thursday, October 20th, 2005

Conference: "Einstein and time"
J.L. Llosa, Dept. de Física Fonamental
Thursday, October 27th, 2005

- **Special lecture: "Information loss in black holes"**
Stephen Hawking, Lucasian Professor of Mathematics, Cambridge University
July 5th, 2005

PHYSICS AND SOCIETY

- **"Physics of the Aesthetics"**
An itinerant exhibit of Physics-related pictures commented by outstanding members of our society: Ferran Adrià, Enric Casasses, Isabel Coixet, Alfons Cornella, Jordi Labanda, Isabel de Pedro, Perejaume, Sara Pérez, Sol Picó, Xavier Rubert de Ventós, Jordi Savall, Toni Segarra, Clara Segura, and Benedetta Tagliabue.

Exhibitions held on: Girona, Sta. Coloma de Farners, Vilanova i la Geltrú, L'Hospitalet, Barcelona, Tarragona, Vendrell, Mollerusa, and Tàrraga.

Organized by: J.I. Latorre and J. Perelló, Dept. d'Estructura i Constituents de la Matèria of the UB, in collaboration with the Fundació Catalana per a la Recerca i la Innovació, the Societat Catalana de Física, and Hewlett-Packard.

From January 1st to December 31st, 2005

- **Literary session “Physics and her friends: Earth, Law, Greece and Truth”**

Presentation of new books:

- “History of Earth and Life”, written by S. Renguant Serra;
- “The law in the face of science’s uncertainties”, written by J. Esteve Pardo;
- “Greece: letters and love-makings”, written by J. Valero Garrido;
- “Scientific truth, hermeneutic truth”, written by A. González Gallego.

Organized by: Javier Tejada, Dept. de Física Fonamental

Friday, April 20th, 2005 (to celebrate Saint George)

- **Observation and broadcast of October’s 2005 solar annular eclipse**



Activities:

- Live webcasting from three different sites: partial eclipse from Barcelona and annular eclipse from Bicorp (Valencia) and Sant Francesc (Formentera, Balears).
- Observations oriented to the general public at several places in Catalonia and in other places on the annular eclipse zone.
- Informative talks.

Organized by: Dept. d'Astronomia i Meteorologia
October 3^d, 2005

- **Opening Exhibition of the historical funds of the Physics and Chemistry Library: “Einstein's Anus Mirabilis”**

Organized by: Physics and Chemistry Faculty, the Societat Catalana de Física, and the Societat Catalana de Química.

October 5th, 2005

- **A mural for the Solar Atrium of the new Physics Building**

Mural contest open to students.

Organized by: Assembly of Physics and Chemistry students and ALQUI (Association of students of Chemistry), in collaboration with the Physics and Chemistry Faculty and the Vicerectorat d'Estudiants de la UB.

November 11th, 2005

- **“Physics and mountaineering”**

Debate among Physics’ professors and other people that have a turn for mountaineering.

Organized by: Xarxa de Dinamització Lingüística de la UB.

Local participants:

Josep Bosch, Dept. d'Electrònica

Conrad Pérez, Dept. de Física Fonamental

Christoff Serre, Dept. d'Electrònica

Invited participant:

Núria Balagué, conquered the Everest in 2004

December 12th, 2005 (13:45h)

