

WYP2005
in the Czech Republic

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Paris, March 3, 2006

Main organizations involved

Union of Czech Mathematicians and Physicists

- Czech Physical Society is its section

Academy of Sciences of the Czech Republic

Universities

- Charles University, Prague
- Czech Technical University, Prague
- Czech Agricultural University, Prague
- Masaryk University, Brno
- Technical University Brno
- University of J. E. Purkyne, Usti-on-Elbe
- University of West Bohemia, Pilsen
- University Hradec Kralove
- Silesian University, Opava
- Palacky University, Olomouc

British Council Czech Republic

People's Astronomical Observatory Prostejov

Czech Head – project and foundation for the propagation of Czech science

GLOBE – Czech branch of an international ecological organization of schools (Eratosthenes experiment)

Young Debrouillards Czech Republic

Czech TV, Czech Radio, main newspapers, some magazines

Funding

Union of Czech Mathematicians and
Physicists: ~ 1 000 EUR

Others: ~ 50 000 EUR (an unverified guess)

No special grants for WYP2005 used

Main towns involved



Activities

National web page:

<http://fzu.cz/varia/wyp2005>

1. Aimed to the general public

1.1. Information media

TV: About 10 relations plus about 30 spots

Program Popularis: World Year of Physics, Vortices of Superconductivity, Radioactive Waste Storing, Metallic Crystals, Magnetic Field of the Earth

Program Czech Heads: 1-3 minutes spots on the results of Czech science, emitted 5 times in a week, about 30 spots on physics

Broadcast: More than 20 relations

A few special programs on WYP2005

Program Meteor: Special Theory of
Relativity, Black Holes, Pierre Auger Lab,
Neutrinos, Chernobyl, Nanotechnologies,
etc.

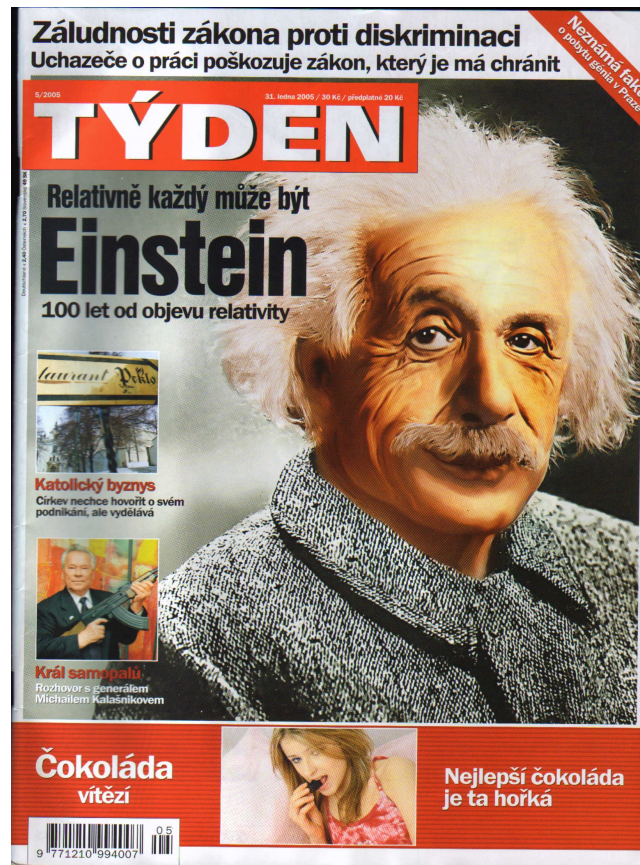
Newspapers and Magazines: about 13
papers

Einstein – his life and discoveries, quark-
gluon plasma, etc.

Example

T. Menschik: Einstein was not only a brain, Tyden ("Week")

5/2005 (Jan. 31, 2005), 24-31.



1.2. Books

- **I. Kraus: The history of technical sciences and inventions in the Czech lands, Academia, Prague 2004**
- **I. Kraus: Stories of the Learned Women, Prometheus, Prague 2005**
- **I. Stoll: Stories on the famous physicists and mathematicians, Prometheus, Prague 2005**

1.3. Exhibitions and street demonstrations

Science in the Streets

Prague, June 23-24, 2005

Pilsen, September 22-23, 2005

organized by Czech Head project.









The World as I See It - a Honour to Einstein
exhibition (including simple interactive experiments)
Technical Museum in Brno
October 11, 2005 - January 29, 2006



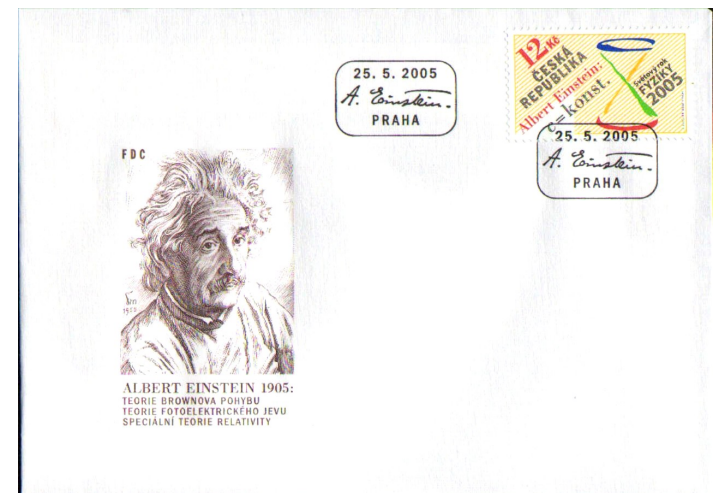


The Week of Science and Technology November 7-13, 2005

- Lectures for the secondary school students and general public
- Open Doors Days at the most institutes of Academy of Sciences of the Czech Republic

1.4. Postage stamp

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2. Activities aimed to children and students

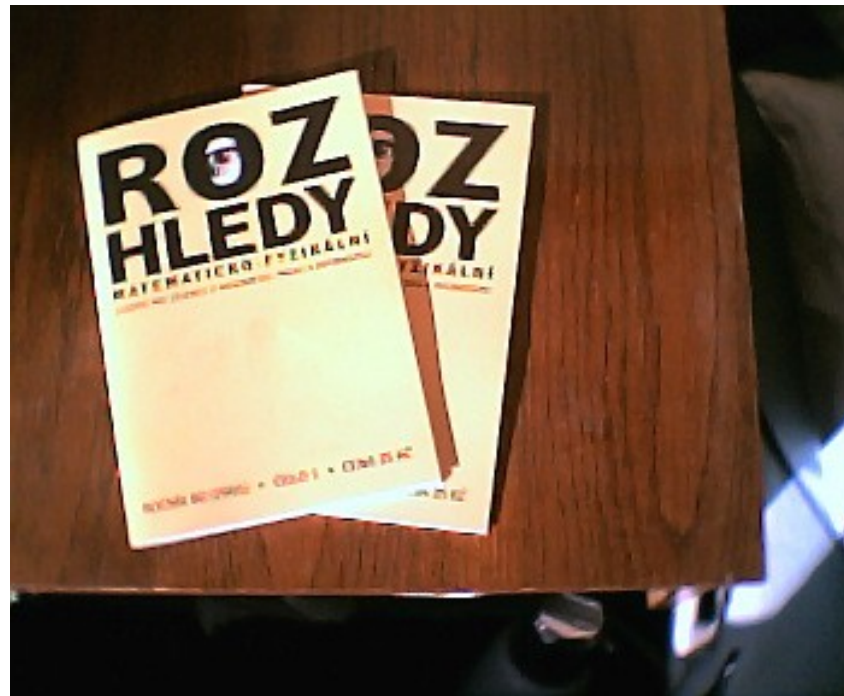
2.1. Student competitions

- **Physics Olympiad**
- **Young Physicists Tournament**
- **For the Magician Poston's ("Experimenton's") Top Hat: 11-14 years old pupils**
- **For the best videorecord of a physical experiment:** secondary school students (sponsored and organized by British Council Czech Republic, with co-organization by Peoples Astronomical Observatory at Prostějov, under the scientific supervision of Institute of Physics ASCR and UCMP)
- **Einstein 2005:** Young Debrouillards (clubs of 6-16 years old children)

2.2. Journal for secondary school students

“Views in Mathematics and Physics”

WYP related article in each issue (Light cone, Light declination in the gravitational field, The World Year of Physics in the mirror of philately)

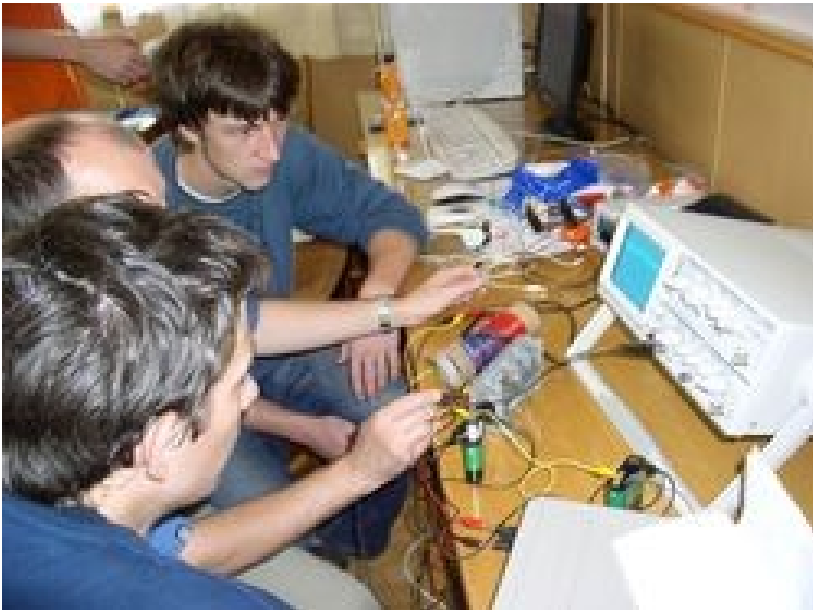


2.3. Books for secondary school students and the public with a deeper interest in physics

- L. Eckertova: **The ways of recognition in physics**, Prometheus, Prague 2004.
- M. Libra, V. Poulek: **Solar energy**, Czech Agricultural University, Prague 2005.
- F. Fabian, Z. Kluiber: **Physics and probability**, ARSCI, Prague 2005.
- Czech translation of the book **E. Schrödinger: What is the Life?**, Vutium, Brno 2004.
- Czech translation of the book **A. Einstein: The Theory of Relativity**, Vutium, Brno 2005.

- **Erathostenes experiment** - measurement of the Earth circumference: an international school experiment within the project GLOBE, May 25 and September 21, 2005.
- **Open Science** – the project consists of experiments performed by secondary school students at the laboratories of ASCR institutes (small groups of students participate at the selected institutes under individual supervision of scientists).
- **European Masterclasses for High School Students: Hands on Particle Physics.** Charles University, Prague, March 8, 2005.
- **Physical Week** at the Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague - for the secondary school students.
- **Summer School on Mathematics and Physics,** Dolni Dvur, July 7-17, 2005 - organized by Faculty of Mathematics and Physics, Charles University for the secondary school students.

- **Meeting of young mathematicians and physicist**
Nekor, July 2-16, 2005 – summer campus organized by Faculty of Mathematics and Physics, Charles University for the secondary school students.



2.5. Popular videocassette

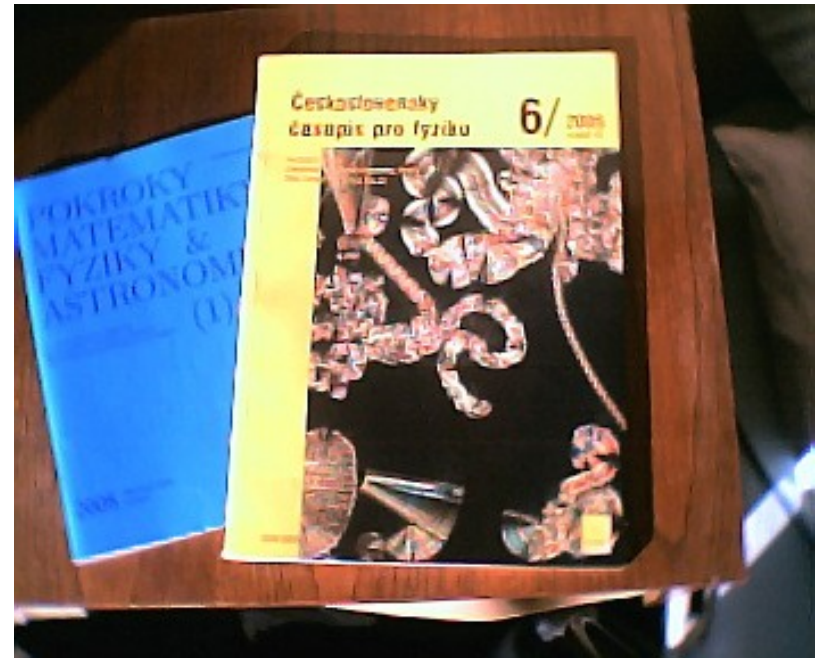
Accelerators and Detectors (about 20 minutes, distributed mainly to the secondary schools)

3. Activities aimed to journalists

- **2 press conferences**
- **Round Table “Modern physics and its interdisciplinary connections”**

4. Activities aimed to physicists and physics teachers

- More than 15 WYP related journal papers
- Books
 - **C. Simane:** The life among atoms
 - **Z. Kluiber:** Creativity of a Teacher and Student Competitions
 - **J. Janta, J. Niederle (eds.):** Physics and Prague
 - **E. Tesinska, Z. Dolejsek, M. Heyrovsky, M. Rotter:** Czech Physicist Vaclav Dolejsek (1895-1945)



Conferences

- Interdisciplinary seminar “**Physics and our world**”, Nectiny, Jan. 10.-13., 2005.
- **Symposium on the 100th Anniversary of the Birth of Known Czech Physicist Vaclav Petrzilka (1905-1976)**, Prague, March 25, 2005.
- **Modern Trends in the Preparation of Physics Teachers**, Srni, April 28-30, 2005.
- **4th Int. Conf. on Physics Teaching in Engineering Education PTEE 2005**, Brno, June 29 - July 1, 2005.
- **Physics Teachers’ Inventions Fair 10**, Prague, August 24-27, 2005.
- **15th Conf. of Slovak and Czech Physicists**, Kosice, Slovakia, September 5-8, 2005. The main Czech and Slovak WYP2005 event.
- **Mathematics at the Universities**, Herbertov, September 5-7, 2005 (physical subjects like fluid mechanics and deterministic chaos included).
- Anniversary conference **George Placzek 1905-1955**, Brno, Czech Republic, September 21-24, 2005.
- **4th International Workshop Applied Physics in Life Sciences**, Prague, Czech Agricultural University, September 23, 2005

Impact

- Clear increase journalists' interest in physics – mainly due to the international WYP propagation
- Lectures for secondary school students, open days, public demonstrations attended by hundreds of young people
- General public – some reactions on TV programs noted, public actions attended also by older people, but in a large scale the public did not care

Experiences

- Most effective are probably actions in TV on the one hand and individual work with small groups of students on the other hand.
- The help of public relations professionals and some financial support are necessary for efficient propagation of physics. Integration into larger projects on the whole science is useful.
- Physicists usually like more their own small projects, they are rather reluctant to large projects organized from above. A substantial cause of that are also time reasons.
- Popularization and public awareness of physics are necessary but it is a long slow process and no dramatic breakthrough can be expected.