

Location



In the days of 22.9. and 23.9.2006 there was held an action called "Science and Technique in the Streets" in Pilsen which was organized by a project "Česká hlava". Department of General Physics was presented in four tents: interactive tent, tents with demonstrational experiments and tent determined for fun contests. All tents were placed in a beautiful locality of Kopeckého sady, just in front of the Museum of West Bohemia in Pilsen. There was also a great fountain in front of the Museum.

The interactive tent was marked with a large title of our department. Its walls were posted with the materials about the possibilities of studies, activities of our department, etc. This tent was our central background; here we were giving illustrative (leading) texts about experiments together with the questionnaires that were lately evaluated.



How Was It Inside?

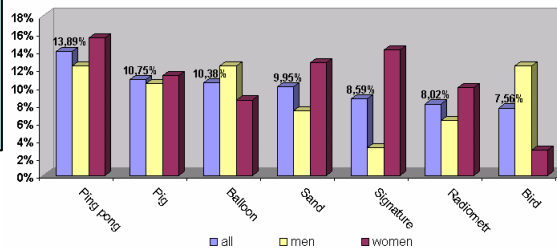


In a long row, there were a lot of interactive experiments together with the instruction. The visitors could experiment themselves. Students of Physics and Ph.D. students were here and ready for help. The help showed up to be very necessary during accompanying the youngest visitors (3-5 years). Interactive experiments were ended with a set of aliasing (optical delusions); physiological ones as well as psychological aliasing. The most playful were the youngest – very popular experiments were Mysterious Sand, Coordination of Movements (to hit a small glass only with one eye) and Lamp Bulb (the goal was to pass a line without touching the conductor; while touching the conductor, the bulb lighted up).



Questionnaires

Which experiment did you like the most?



The part of the interactive tent was a spot with illustrations of "perpetuum mobile". This exhibition was conducted by the director of our department Doc. Dr. Ing. Karel Rauner who was explaining the proper definition.

The most popular experiment was "ping pong". There was hidden a problem task. The goal was to get two ping pong balls onto the opposite bottoms of a vase that was made by sticking of two transparent dishes together.

The children were not the only ones who were experimenting and playing; we could find also their parents and grandparents enjoying their time here.



"Pig" hid 3D total reflection. According to the total reflection the pig is displayed on a bottom of a spherical mirror into a different spot in space.



The third most popular experiment was "Balloon". This experiment belonged to the problem tasks. The goal was to set a tin to a movement by the help of the balloon but without mutual touching. The balloon must have had still the same volume.

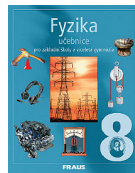
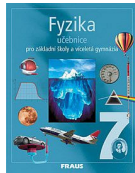
"Sand" was a shortcut for an experiment in which the visitors were to reveal the secret of the sand. They got the dish with the sand and their task was to find what was hidden in the sand without throwing the sand out.

3D Projection

In our large tent there was also a place for 3D projection. After short comment and explanation of the principle there followed a large amount of examples, e.g. the images of Solar System, especially from the surface of Mars and Moon. The visitors could become astronauts for a short time. They were also able to see the images from American national parks. 3D projection were also presented in the area of Škoda Holding during the European Researchers' Night 21.9.2007

Significant Activities

Our important activities are the care of gifted students (e.g. annual weekly camp, physical Olympiad), the offer of many interesting courses for all types of schools, "Science and Technique in the Streets", journal "Školská fyzika" and also writing of a complete set of exercise books of Physics for primary schools. The textbook for 6th grade was awarded as the third best book in Europe in 2005.



Model of a Nuclear Bomb



The director of our department Doc. Dr. Ing. Karel Rauner is in action again. He demonstrated the functional model of a nuclear bomb. It was constructed from matches and the chain reaction was very powerful and well seen even from a distance. When one match on one plate had been lighted, nothing happened (comparison to a sub critical amount of radioactive material). After adding the second set of matches, the sub critical amount had changed into above critical one and the chain reaction started.