



PL9901800

6 DEPARTMENT OF HIGH ENERGY PHYSICS

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Overview

The main activity of our Department is experimental high energy physics with accelerators. Experiments are carried using large facilities:

- at CERN, the European Laboratory for Particle Physics in Geneva,
- at Celsius Storage Ring in Uppsala and
- in Desy laboratory in Hamburg,

where several groups of physicists from our Department are members of international collaborations. They are listed below together with the main physics interests:

- At CERN
 - Delphi at LEP - tests of the Standard Model, b-quark physics, SUSY search,
 - NA48 - CP-violation in K^0 decays, rare decays,
 - SMC - spin dependent nucleon structure function, the Bjorken sum,
 - NA49 and WA98 - heavy ion physics.
- At CELSIUS
 - WASA - threshold production of light mesons, rare meson decays.
- At DESY
 - ZEUS - proton and photon structure functions, diffractive production.

In most of these experiments our Department also contributed to the instrumentation of detectors and is presently involved in data collection, detector supervision and in data analysis.

At the same time the Department is also involved in preparation of new experiments:

- CMS (Compact Muon Solenoid) and ALICE at the LHC (Large Hadron Collider) at CERN ,
- COMPASS (Compact Muon and Proton Apparatus for Structure and Spectroscopy) at the SPS at CERN,
- WASA-Promice - an upgrade of the present detector at Celsius,
- hyperfragment experiment at JINR, Dubna.

The department has small workshop which was recently involved in an upgrade of the WASA detector.

In our Department there are also two physicists working on the phenomenology of a quark-gluon plasma and on the low energy hadron-hadron interactions.

Physicist from our Department collaborate with the Department of the Experimental Physics of Warsaw University. They are also involved in teaching and in supervision of diploma students. There is a group of 9 PhD students.