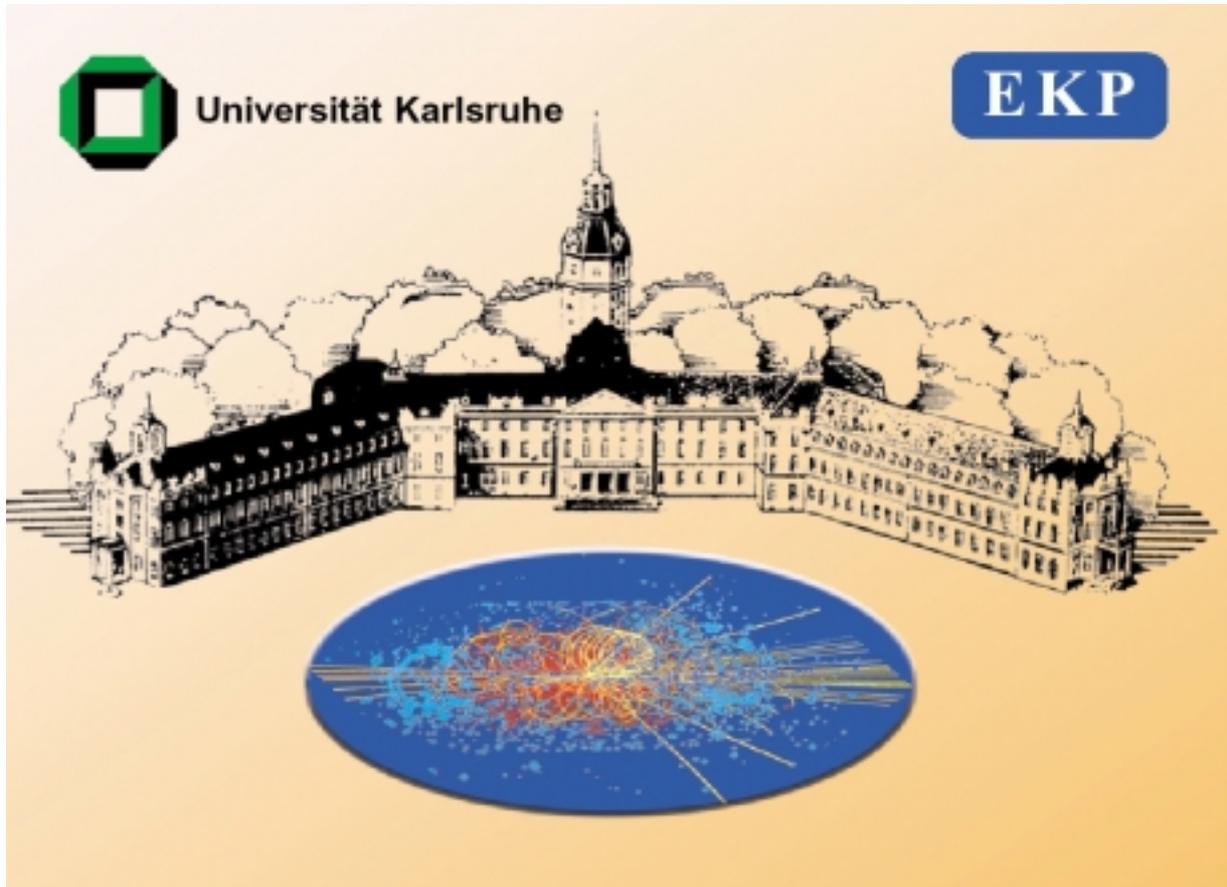


14th Topical Conference on Hadron Collider Physics

HCP 2002



September 29th until October 4th, 2002
Universität Karlsruhe (TH), Germany

Bulletin 2, May 2002

1. General Information

The 14th Topical Conference on Hadron Collider Physics, **HCP2002**, will be held in Karlsruhe, Germany, from Sunday, September 29th until Friday, October 4th, 2002 on the campus of the Universität Fridericiana.

The conference is jointly organized by the Institut für Experimentelle Kernphysik and the Institut für Theoretische Teilchenphysik der Universität Karlsruhe (TH).

Information on the conference is available from the conference website:

<http://hcp2002.physik.uni-karlsruhe.de/>

This bulletin will present the preliminary conference program, give some update information on the conference facilities, proceedings requirements, and the social program.

2. Preliminary Scientific Program

The scientific program will cover the most recent results in hadron collider physics from HERA at DESY and Tevatron at FERMILAB, developments in the theory of hadron collider physics, as well as latest developments in the preparation of the LHC program at CERN, and related topics. The program will consist of plenary talks in the format of review talks and shorter contributions.

Monday, 30. 9.

- 9:45 - 10:15 Welcome to the conference, organizational issues
10:15 - 11:15 Opening review on hadron-collider Physics
Expected contributions to our understanding of the Standard Model and glimpses at new physics
11:15 - 15:00 Status of the accelerators and detectors
HERA and its experiments
TEVATRON and CDF, D0
- LUNCH
- LHC and its technical challenges
Experience with LHC-Type operation at HERA-B
- COFFEE
- 15:45-18:00 Parton luminosities, QCD evolution
Proton structure
Low-x physics, ep scattering in the vicinity of hadronic interactions.
- COFFEE
- Global fits of the parton distributions in the proton
NNLO QCD and determination of the strong coupling constant
- 19:00 - 21:00 *Reception at the castle*

Tuesday, 1. 10.

- 8:30 - 12:30 QCD at high p_t
Heavy quark production,
Jets, prompt photon production at HERA, TEVATRON
- COFFEE
- Theoretical understanding of jet, prompt photon, heavy quark production
Impact of jet finding on physics results,
discussion and recommendation
- LUNCH
- 14:00 - 15:45 QCD : diffractive processes
Measurements of diffractive processes at HERA
Measurements of diffractive processes at TEVATRON
Theoretical implications of diffractive processes
- COFFEE
- 16:15-18:00 Heavy ion collisions
First results from RHIC
Expectations from heavy ion collisions
- 20:00 *Concert at the Gerthsen Hörsaal*

Wednesday, 2. 10.

8:30 - 10:15 W, Z-bosons, EWK parameters
Measurements of the W, Z production cross section, W-asymmetry
Theoretical understanding of W, Z Physics incl. W/Z+njet production

COFFEE

10:45-12:30 Heavy Flavour, CKM and CP-violation
B-mass, B-lifetime at TEVATRON
Prospects for B-s oscillations, CP-violation at TEVATRON
Impact of bottom-quark measurements on our knowledge of the Standard Model

LUNCH

13:30 - 20:00 *Excursions*

Thursday, 3. 10.

8:30-10:30 Top quark
Top quark physics incl. single top production at TEVATRON
The top quark in the Standard Model and beyond

COFFEE

11:00-18:00 Searches for New Phenomena

11:00-12:45 Higgs in the SM, SUSY
Searches and prospects from TEVATRON
Prospects at LHC
Recent theoretical progress

LUNCH

14:00-18:00 Alternative symmetry breaking mechanisms, SUSY, extra dimensions, anomalous couplings, leptoquarks and compositeness
Searches, discovery windows, expected signatures of new phenomena at HERA, TEVATRON, LHC

COFFEE

New theoretical developments on physics beyond the Standard Model

19:30 *Conference dinner*

Friday, 4. 10.

8:30-13:00 Tools and Techniques for Physics Analysis

8:30-9:30 Luminosity determination in hadron-hadron collisions
Luminosity determination at the TEVATRON
Luminosity determination at the LHC

9:30-10:45 Event generators
Event generators for HERA, TEVATRON, LHC, new developments, quality of describing measurements

COFFEE

11:15-13:00 New developments in analysis techniques
Candidate topics: event reconstruction in high-rate environment, jet finding, neural net technology
Computing and GRID used by BABAR, TEVATRON and LHC

LUNCH

14:00-15:00 Linear Colliders, Super LHC and the VLHC

15:00-16:00 Highlights of the conference

3. Transparencies and Proceedings

Copies of the transparencies will be available on the conference website. Speakers are kindly asked to provide a pdf-file of their transparencies at the conference.

All write-ups of the talks will be included in the proceedings, which will appear at Springer Publishing Company. A volume of the proceedings will be provided to every participant with the cost included in the registration fee.

The write-ups should be provided as camera-ready postscript-files using the following latex example, [hcp2002.tex](#), and the latex style file, [hcp2002.sty](#). Deadline for write-ups to be included in the conference proceedings is Monday, November 18th, 2002.

4. Conference Facilities

The conference registration desk at the Foyer of the Hörsaal am Forum, building 30.95 on [the campus](#) of the university, will be open on the arrival day, Sunday 29, 15:00 – 20:00 and during conference daily from 8:30 – 18:00. **Please, pay attention to the change of the conference location as announced in bulletin 1.**

The talks will take place in the Hörsaal am Forum, building 30.95. Speakers will find overhead projectors, beamer with standard interface for their presentations.

Computer terminals and interfaces will be available during daytime.

5. Excursions and Accompanying Persons Program

On Wednesday afternoon two excursions will be offered which can be booked together with the online registration but have to be paid separately.

- Visit to Heidelberg with its world-famous castle. A boat trip on the river Neckar shows the breathtakingly beautiful landscape of the surroundings. On the boat a snack will be served. After a visit to the Castle a romantic stroll through the picturesque Old Town with its historic streets and Germany's oldest University gives the impression of a lively and attractive town. **EUR 25,-**
- Visit of the imperial Cathedral of Speyer, one of the largest and the most significant Romanesque edifices in Germany, burial church of the Salic Emperors. In 1980, the cathedral was added to the UNESCO World Heritage program. **EUR 25,-**

The excursion continues through the seasonal colored wine-growing area of Palatinate and ends with a wine tasting (including bread, sausage, ham and cheese) in a winery.

Accompanying Persons Program:

Monday, 30. 9.

Afternoon: **The Maulbronn monastery (EUR 15,-)**

Guided tour through the monastery which has maintained its medieval character over the centuries and is a UNESCO world cultural monument.

Evening: *Reception at the castle*

Tuesday, 1. 10.

Morning and afternoon: **The picturesque towns of Ettlingen and Bad Herrenalb (EUR 25,-)**

We take the tram from Karlsruhe to Ettlingen (2000 years of history). Walk through the historic old town (castle, church, town hall, medieval alleys). Lunch in a charming cellar restaurant (two courses with regional specialties, included in the fee). Beverages have to be paid separately. The tram takes us through the pretty Alb valley as far as the spa Bad Herrenalb. Stroll through the park to the center with the cloister and the historic cloister street with shops and coffee houses.

Evening: *Concert*

Wednesday, 2. 10.

Morning: **Majolica Manufacturing Works Karlsruhe (EUR 0,-)**

Guided tour through the manufacturing plant which is located on the edge of the palace park.

Afternoon: *Conference excursion*

Thursday, 3. 10.

Morning and afternoon: **The Black Forest (EUR 20,-)**

Exploring the northern part of the Black Forest, we drive on the famous Black Forest High Road (about 65 km) from Baden-Baden to Freudenstadt. The way back to Karlsruhe leads through charming valleys.

Evening: *Conference dinner*

The above excursions and guided tours can be booked together with the online registration.

6. Important Dates and Deadlines

Start of registration: April 15, 2002

Deadline for prepaid registration: July 1, 2002

Deadline for hotel booking: August 12, 2002

Deadline for booking excursions: September 2, 2002

Deadline for cancellation/refunds of registration fee: September 2, 2002

Deadline for proceedings contributions: November 18, 2002

7. Further Information

The conference website at <http://hcp2002.physik.uni-karlsruhe.de/> will be updated as information becomes available. Further questions and special requests can be addressed to the conference secretariat:

HCP2002 Secretariat: Mrs. Waltraud Weissmann Institut für Experimentelle Kernphysik Universität Karlsruhe (TH) Postfach 6980 D 76128 Karlsruhe	Telefon: +49 721 608-3521 Telefax: +49 721 607 262 email: hcp2002@ekp.physik.uni-karlsruhe.de
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List of Conference Sponsors:

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