

DPG-Schule für Physik

Physikzentrum Bad Honnef
supported by the
Wilhelm und Else Heraeus-Stiftung

Course III: 6 to 10 October 2003 Hadron Massproduction

Prof. Dr. Ulrich Mosel, Universität Gießen

Masses of hadrons are unlike masses of any other bound systems: the building blocks, the quarks, weigh much less than the composite system, the meson or baryon. Quantum Chromodynamics contains the answer to this puzzle, but quantitative results have long been difficult to obtain in the non-perturbative sector of QCD. Only recently Lattice QCD has made a major step forward, both in its techniques and its results. On the other

hand, effective field theories have been developed to bridge the gap between QCD and phenomenological models. The school „Masses of Hadrons“ aims at providing an introduction into these fields which are only rarely covered in graduate lectures. The school is thus addressed mainly to graduate students and young postdocs in the field of theoretical and experimental hadron physics.

- **In-medium properties of hadrons from lattice QCD** *Frithjof Karsch, U Bielefeld*
- **From quark to hadron masses** *Ulf-G. Meissner, U Bonn*
- **Properties of hadrons and their modification in the nuclear medium: recent experimental results** *Volker Metag, U Gießen*
- **Light front nuclear physics: What, Why, How** *Gerald Miller, U Washington*
- **Open and hidden strangeness production in the threshold region of hadronic interactions** *Walter Oelert, FZ Juelich*
- **Quark distribution functions and form factors on the lattice** *Anderas Schaefer, U Regensburg*
- **Physical results from unphysical lattice QCD simulations** *Steve Sharpe, U Washington*
- **Hadrons in dense matter** *Jochen Wambach, U Darmstadt*
- **Chiral symmetry on the lattice** *Uwe-Jens Wiese, U Bern*

Cost Covering full board and lodging at the Physikzentrum Bad Honnef from dinner on Sunday to lunch on Friday
Euro 270 (Euro 220 for students)
Euro 160 without lodging

The WE-Heraeus-Foundation provides funds for young physicists, members of the DPG (German Physical Society contribution level A or E), or European sister societies, covering partly (up to 50%) the expenses for full board and lodging and travel expenses within Germany

Application The Application Form for the School (www.pbh.de/applic2003A.html) should be completed and sent as soon as possible, not later than 1 July 2003 to gomer@pbh.de

The number of participants will be about 60. The selection of the participants will be made by the organisation committee (Scientific and local directors), and all applicants will be informed in July 2003 whether their application has been successful. Participants are invited to bring posters/CD's that contain information about their research.