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Michael Beyer (Ed.)

# CP Violation in Particle, Nuclear and Astrophysics



Springer

## Editor

Michael Beyer  
Universität Rostock  
Fachbereich Physik  
18051 Rostock, Germany

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# Preface

The exciting experiments of the BABAR and BELLE collaborations have now proven violation of CP symmetry in the neutral  $B$  system. This has renewed strong interest in the physics of CP violation. Novel experimental techniques and new highly intense neutron sources are now becoming available to further test the related time reversal symmetry. They will substantially lower the current limit on the neutron electric dipole moment and hence open up new tests of theoretical concepts beyond the Standard Model. These are strongly required to explain the decisive excess of matter versus antimatter in our Universe.

There is a definite need to communicate these exciting developments to younger scientists, and therefore we organized a summer school in October 2000 on “CP Violation and Related Topics”, which was held in Prerow, a small Baltic Sea resort. These Lecture Notes were inspired by the vivid interest of the participants, and I am grateful to the authors, who faced the unexpected and delivered all the material for an up-to-date introduction to this broad field.

It is a great pleasure for me to warmly thank the Co-organizers of the summer school, Henning Schröder, Thomas Mannel, Klaus R. Schubert and my colleague Roland Waldi.

Also I would like to express my sincere thanks to the Volkswagen-Stiftung for their financial support of this inspiring summer school.

Rostock, July 2002

*Michael Beyer*

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# List of Contributors

**Werner Bernreuther**  
Institut für Theoretische Physik,  
RWTH Aachen,  
52056 Aachen, Germany  
breuther@physik.rwth-aachen.de

**Michael Beyer**  
Fachbereich Physik,  
Universität Rostock,  
18051 Rostock, Germany  
michael.beyer  
@physik.uni-rostock.de

**Edward David Davis**  
Physics Department,  
Kuwait University,  
P.O. Box 5969,  
Safat, Kuwait  
davis@kuc01.kuniv.edu.kw

**Gian Francesco Giudice**  
Theoretical Physics Division,  
CERN,  
1211 Geneva 23,  
Switzerland  
Gian.Giudice@cern.ch

**Christopher R. Gould**  
North Carolina State University,  
Raleigh NC 27695, USA,  
and  
Triangle Universities Nuclear  
Laboratory,

Durham NC 27708, USA  
chris.gould@ncsu.edu

**Ernest M. Henley**  
Department of Physics,  
and Institute for Nuclear Theory,  
Box 351560,  
University of Washington,  
Seattle, WA 98195-1560, USA  
henley  
@nuclthy.phys.washington.edu

**Konrad Kleinknecht**  
Institut für Physik,  
Johannes Gutenberg-Universität,  
Staudinger Weg 7,  
55099 Mainz, Germany  
kleinknecht  
@dipmza.physik.uni-mainz.de

**Klaus R. Schubert**  
Institut für Kern-  
und Teilchenphysik,  
Technische Universität Dresden,  
01062 Dresden, Germany  
schubert@physik.uni-dresden.de

**Roland Waldi**  
Fachbereich Physik,  
Universität Rostock,  
18051 Rostock, Germany  
roland.waldi  
@physik.uni-rostock.de