

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.

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