Refereed and selected contributions from

From Parity Violation
to Hadronic Structure
and more

Grenoble, France
June 8–11, 2004

edited by
S. Kox, D. Lhuillier, F. Maas, and
J. Van de Wiele

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From Parity Violation to Hadronic Structure and more ... (Part II)
Almost 50 years after the proposal of Lee and Young in 1956 to test the hypothesis of parity violation in weak interactions and the subsequent experimental verification of parity violation by C.S. Wu, parity violation has today become a useful property of weak interactions. This is due to the fact that the focus nowadays has changed: parity violation in weak interactions is no more a topic of investigation but is used as a tool in many different fields ranging from nuclear physics to the search for the hidden extra dimensions requested by string theory.

For our first workshop which took place June 5–8, 2002, at the Institut für Kernphysik of the Johannes Gutenberg-Universität Mainz, we concentrated on the investigation of the strangeness contribution in the nucleon. This book contains the refereed and selected papers of the second workshop “From Parity Violation to Hadron Structure and more (Part II)”, which took place June 8–11, in the Laboratoire de Physique Subatomique et de Cosmologie, in Grenoble. These papers appear in EPJAdirect, the electronic-only part of EPJA, and they are accessible without restrictions. They will also appear in printed form and can be ordered through Springer. The excellent presentations show the dramatic and steady progress in the accuracy of measured parity violating asymmetries over the last few years. The neutral weak current appears as a powerful new probe of matter driving experimentalists and theorists towards new frontiers in the structure of the nucleon and in the exploration of the electroweak interaction and the physics beyond.

Our thanks for making the workshop such a success go to Madame J. Riffault, who as the conference secretary organized all the nonscientific aspects of the workshop. Without her tireless effort the workshop would not have become such a great success of scientific exchange.

The conference also received financial support from scientific and local organizations as well as sponsors. This has allowed the event to take place and the refereed and selected papers to be published. In addition the International Advisory Committee helped us to establish the scientific program and scope of the workshop. Thanks to all of them.

There are new experiments going on; plenty of data have been taken and are now being analyzed. We are very much looking forward to the exciting future where
parity violation will bring many new insights into nature. We are currently planning part III of the workshop, which will be held on Milos Island in Greece in May 2006, where we hope to celebrate with all the participants the 50th anniversary of the discovery of parity violation.

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