

New Insights into the Structure of Matter

The First Decade of Science at Jefferson Lab

Journal of Physics: Conference Series Volume 299

Held over various years.

ISBN: 978-1-62276-676-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by the Institute of Physics
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

CHAPTER 1

Making the Case for Jefferson Lab	1
<i>F. Gross</i>	

CHAPTER 2

Nucleon Form Factors – A Jefferson Lab Perspective	21
<i>J. Arrington, K. Jager, C. Perdrisat</i>	

CHAPTER 3

Strange Vector Form Factors from Parity-Violating Electron Scattering	41
<i>K. Paschke, A. Thomas, R. Michaels, D. Armstrong</i>	

CHAPTER 4

Unpolarized Structure Functions at Jefferson Lab	63
<i>M. Christy, W. Melnitchouk</i>	

CHAPTER 5

Spin Structure Functions	84
<i>J. Chen, A. Deur, S. Kuhn, Z. Meziani</i>	

CHAPTER 6

Deeply Virtual Exclusive Processes and Generalized Parton Distributions	104
<i>C. Hyde, M. Guidal, A. Radyushkin</i>	

CHAPTER 7

Lattice QCD and the Jefferson Lab Program	128
<i>J. Dudek, R. Edwards, K. Orginos, D. Richards</i>	

CHAPTER 8

Results from the N* Program at Jefferson Lab	146
<i>I. Aznauryan, V. Burkert, T. Lee, V. Mokeev</i>	

CHAPTER 9

Transition to Perturbative QCD	166
<i>R. Gilman, R. Holt, P. Stoler</i>	

CHAPTER 10

Short-Distance Structure of Nuclei	182
<i>D. Higinbotham, E. Piasetzky, L. Weinstein, S. Wood</i>	

CHAPTER 11

Medium Modifications of Hadron Properties and Partonic Processes..... 196
W. Brooks, S. Strauch, K. Tsushima

CHAPTER 12

Searches for Physics Beyond the Standard Model..... 216
J. Roche, W. Oers, R. Young

CHAPTER 13

Hypernuclear Spectroscopy 234
F. Garibaldi, O. Hashimoto, J. LeRose, P. Markowitz, S. Nakamura, J. Reinhold, L. Tang

CHAPTER 14

The Jefferson Lab Free Electron Laser Program 257
S. Benson, D. Douglas, G. Neil, M. Shinn

CHAPTER 15

CEBAF Accelerator Achievements 279
Y. Chao, M. Drury, C. Hovater, A. Hutton, G. Krafft, M. Poelker, C. Reece, M. Tiefenback

Author Index