

CONTENTS

Preface	v
Contents	vii
I. Making Precision Measurements at Hadron Colliders: Two Lectures <i>HJ Frisch</i>	1
II. Evidence for a Quark-Gluon Plasma at RHC <i>J. Harris</i>	33
III. Fundamental Experiments at Low Energies H. Jurgen Kluge	52
IV. Neutrino Physics: A Selective Overview <i>S Oser</i>	63
V. Low-Energy Tests of the Standard Model <i>M Pospelov</i>	93
Charged Particle Multiplicities in Ultra-Relativistic AU+AU and CU+CU Collisions <i>BB Back, et al</i>	111
Standard Model Physics at CMS <i>S Beaucheron</i>	116
Recent Results in Diffractive ep Scattering at HERA <i>M Beckingham</i>	121
High- P_T Suppression in Heavy Ion Collisions From the Brahms Experiment at RHIC <i>S Bekele</i>	126

The Suppression of High P_T Non-Photonic Electrons in AU+AU Collisions at GEV at $\sqrt{s_{NN}} = 200$ RHIC <i>J Bielcik</i>	131
Direct CP Violation Results in $K^\pm \rightarrow 3\pi^\pm$ Decays from NA48/2 Experiment at CERN <i>C Bino</i>	136
Neutrino Astronomy at the South Pole <i>DJ Boersma</i>	146
Direct CP Violation in B Decays at BELLE <i>M Bracko</i>	151
Standard Model Physics With The Early Data <i>P Bruckman De Renstrom</i>	156
Leptonic B Decays <i>M-C Chang</i>	161
Searches for the Higgs Boson in CMS <i>Georgios Daskalaskis</i>	166
New Physics at EP Collisions <i>Jerome De Favreau</i>	171
Recent Electroweak Results From $D\bar{D}$ <i>JD Degenhardt</i>	177
Search for Exotic Physics with Atlas <i>PA Delsart</i>	182
Getting Ready for Physics at the LHC with the CMS Detector <i>V Drollinger</i>	187
W and Z Cross Section Measurement at CDF <i>I Fedorko</i>	193

New Resonances and Spectroscopy at BELLE <i>B Golob</i>	198
Cosmic Neutrinos Beyond the Standard Model <i>U Harbach</i>	204
Lepton Flavor Violating τ Decays at BABAR <i>C Hast</i>	210
Measurement of $\sin 2\phi_1$ In $b \rightarrow s$ Decays at BELLE <i>NC Hastings</i>	215
DVCS Measurements with Nuclear Targets at HERMES <i>M Hoek</i>	220
Measurement of Forward-Backward Asymmetry in $B \rightarrow K^* \ell^+ \ell^-$ at BELLE <i>A Ishikawa</i>	225
The Latest from Minos <i>H Kang</i>	230
Black Holes and Quasistable Remnants at the LHC <i>B Koch</i>	235
Noncommutative Geometry and the Particle Content of the Universe <i>T Kopf</i>	240
A Study of Mixing in the $B_S^0 - \bar{B}_S^0$ System Using the DØ Detector <i>D Krop</i>	244
Expected Physics Performance of the LHC Experiment <i>O Leroy</i>	249
Isoscalar Extraction of ΔS in the Nucleon at HERMES from Semi-Inclusive DIS <i>LA Linden Levy</i>	254

Electroweak Physics at HERA <i>J List</i>	260
Recent Results on Radiative Penguin and Leptonic B Decays at $BABAR$ <i>TB Moore</i>	266
The Cobra Double Beta Decay Experiment <i>B Morgan</i>	271
Proton Structure from HERA <i>K Nagano</i>	276
The LHCb Tracking System and Its Performance <i>J Nardulli</i>	281
New States at $BABAR$ <i>M Negrini</i>	287
Measurement of the CKM Angle γ at $BABAR$: Status and Prospects <i>N Neri</i>	292
Search for New Phenomena at the $D\bar{D}$ Experiment <i>C Noeding</i>	298
Charm Physics at $BABAR$ <i>A Oyanguren</i>	303
Mass-Dependent $O(\alpha_s^2)$ Corrections to Semileptonic B-Quark Decay at $M(\ell\nu_\ell)=0$ <i>Alexey Pak</i>	308
Top Physics at CDF <i>E Palencia</i>	313
DI-Electron Widths of the $Y(1S)$, $Y(2S)$, and $Y(3S)$ from the CLEO-III Detector <i>J Pivarski</i>	318

Electron Reconstruction and Calibration with Single Z and W Production in CMS at the LHC <i>C Rovelli</i>	323
Searching for Dark Matter Annihilation in Z=-1 Cosmic Rays with AMS <i>G Rybka</i>	328
Atlas Construction: A Status Report <i>A Sfyrla</i>	333
Double Longitudinal Spin Asymmetry in Inclusive Jet Production in Polarized P+P Collisions at $\sqrt{s} = 200$ GEV <i>F Simon</i>	338
New Phenomena Searches at CDF <i>A Soha</i>	343
Electroweak Results at LEP2 <i>P Spagnolo</i>	348
Picasso: Direct Dark Matter Detection Using The Superheated Droplet Technique <i>CE Storey</i>	356
LHCb Particle Identification and Performance <i>P Szczypka</i>	367
B _c at CDF <i>W Wester</i>	372
Transversity Measurements at HERMES <i>B Zihlmann</i>	377
List of Participants	383