

CONTENTS

Preface

Contents

I. LHC to ILC <i>B. Barish</i>	1
II. Status of the CMS Experiment and First Physics <i>A. De Roeck</i>	35
III. The LHCb Experiment <i>V. Gibson</i>	60
III. LHC Physics and Cosmology <i>N.E. Mavromatos</i>	80
IV. The Status of the Atlas Experiment <i>M.A. Parker</i>	128
V. Heavy-Ion Physics at the LHC with ALICE <i>R. Snellings</i>	142
VI. Dark Matter <i>V. Zacek</i>	170
Recent Results on High Q^2 Cross Sections and Electroweak Studies at HERA <i>S. Aplin</i>	207
Rare B Decays at BABAR <i>D. Bard</i>	212
Higgs Searches: CMS Recent Results Overview <i>D. Benedetti</i>	217
Charmless Hadronic B Decays at BABAR <i>J. Biesiada</i>	222
Diffraction and Diffractive Final States at HERA <i>A. Bonato</i>	227
τ Decays at BABAR <i>R. Cenci</i>	232
DØ Results on New Phenomena (BSM) Searches <i>S. Chakrabarti</i>	237

Semileptonic B Decays at BABAR <i>D. Cote</i>	242
DØ Results on Higgs Searches <i>Y. Enari</i>	247
D Semileptonic Decays at CLEO-C <i>L. Fields</i>	252
Evidence for Single Top Quark Production and a First Direct Measurement of $ V_{tb} $ <i>D. Gillberg</i>	257
Recent Results from the MINOS Experiment <i>A. Godley</i>	262
Parton Densities and Determination of α_s from ep Collisions <i>L. Goerlich</i>	267
Status and Future Plans of the PICASSO Experiment <i>R. Gornea</i>	273
Measurements of Top Quarks Produced in Pairs at D0 <i>R. Harrington</i>	279
DØ Results on Electroweak Measurements <i>C. Hensel</i>	284
Overview of the Standard Model Physics Potential at the CMS Detector <i>J. Heyninck</i>	289
Identified Particle Measurements at Large Transverse Momenta from P+P to A_U+A_U Collisions at RHIC <i>R.S. Hollis</i>	294
Status of the Icecube Experiment <i>B. Hughey</i>	300
Vector Boson Scattering at High Energy at the LHC <i>J. Idarraga</i>	305
Measurements of ϕ_2 and ϕ_3 from BELLE <i>H. Ishino</i>	311
Search for the Higgs Boson on the $H \rightarrow \gamma\gamma$ Channel in the Atlas Experiment <i>I. Koletsou</i>	316
Observation of the Askaryan Effect in Ice with the Anita Experiment <i>R.J. Kowalski</i>	321

LHCB Potential to Measure/Exclude the Branching Ratio of the Decay $B_s \rightarrow \mu^+ \mu^-$ <i>G. Lanfranchi</i>	326
Heavy Flavor Production in ep Collisions <i>G. Leibenguth</i>	333
Measurement of the CKM Angles α and γ at the BABAR Experiment <i>V. Lombardo</i>	338
Isospin Asymmetry in Rare B Decays as a Constraint for New Physics <i>F. Mahmoudi</i>	343
Latest Top Results from CDF <i>F. Margaroli</i>	348
QCD Studies Through Hadronic Final States at HERA <i>T. Matsumoto</i>	353
Longitudinal Double-Spin Asymmetry and Cross-section Measurement for Inclusive Jets at $\sqrt{S} = 200$ GEV in Polarized PP Collisions <i>J. Millane</i>	358
Constraints on Dissipative Non-equilibrium Dark Energy Models from Recent Supernova Data <i>V.A. Mitsou</i>	363
Rare B Decays at BELLE <i>M. Nakao</i>	368
Elliptic Flow, Initial Eccentricity and Elliptic Flow Fluctuations in Heavy Ion Collisions at RHIC <i>R. Nouicer</i>	373
Hot Topics from BELLE <i>L.E. Pilonen</i>	380
Effect of Nuclear Polarizability in Li^{11} <i>M. Puchalski</i>	385
Recent Electroweak Results from CDF <i>A.N. Safonov</i>	390
Searches for New Physics in ep Collisions <i>U. Schneekloth</i>	395
Analysis of Quantum Correlations in $D^0 \bar{D}^0$ Decay Rates at the $\psi(3770)$ Energy <i>A.W. Scott</i>	400

Prospects for New Physics Searches at CMS <i>C.H. Shepherd-Themistocleous</i>	405
First Run II Measurement of the W Boson Mass with the Collider Detector at Fermilab <i>O. Stelzer-Chilton</i>	410
The T2K Near Detector and Particle Identification <i>B. Still</i>	415
Combined Measurement of the Lifetime Difference and CP-Violating Phase in the B_s^0 System at DØ <i>D. Strom</i>	420
Measurements of CKM Angle β from BABAR <i>K.A. Ulmer</i>	425
The Determination of the CKM Elements $ V_{ub} $ and $ V_{cb} $ at the BELLE Experiment <i>P. Urquijo</i>	430
Latest QCD Results from CDF <i>S. Vallecorsa</i>	437
Sensitivity to the B_s^0 Mixing Phase at LHCb <i>P. Vankov</i>	442
γ Determination from TREE Decays ($B \rightarrow DK$) with LHCb <i>J. Van Tilburg</i>	447
New Physics Searches at CDF <i>P. Wagner</i>	452
Phenomenology from a U(1) Gauged Hidden Sector <i>J.M.S. Wu</i>	457
Search for WIMP Annihilation with the AMS-01 Electron Spectrum <i>S. Xiao</i>	462
Measurement of ϕ_1 in $b \rightarrow ccs$ and sqq Decays from BELLE <i>Y. Yusa</i>	467
List of Participants	473