

CONTENTS

Preface	v
Monday morning session: QCD Scattering I	
Organizer and Session Chairman: <i>A. Capella</i>	
Diffraction Processes and Small- x Physics (paper presented not submitted) <i>A. Kaidalov</i>	3
Structure Functions and Small- x Physics <i>J. Kwieciński</i>	3
The Soft Pomeron <i>P. V. Landshoff</i>	11
Multipomeron Exchange in the Perturbative QCD. The EMC Effect at Small x <i>M. A. Braun</i>	17
Monday afternoon session: QCD Scattering II/Quantum Field Theory I	
Chairman: <i>B. Müller</i>	
A Simple Model for Total Cross Sections <i>K. Kang</i>	25
Measuring the Phase of the Nuclear Scattering Amplitude <i>M. M. Block</i>	37
Survey of High Energy Spin Physics <i>A. D. Krisch</i>	46
“Plaidoyer” for Fixed Target Experiments <i>A. Martin</i>	47
Static Color-Coulomb Force from Restriction to Gribov Region <i>D. Zwanziger</i>	48

Tuesday morning session: Quantum Field Theory II

Organizer and Session Chairman: G. Sl Guralnik

Non-Abelian Gauge Fields in Geometric Variables <i>K. Johnson</i>	57
The Glueball; The Fundamental Particle of Non-Perturbative QCD <i>G. B. West</i>	64
On Bose-Einstein Condensation <i>T. T. Wu</i>	76
Dimensional Expansion as a Nonperturbative Approach to Quantum Field Theory <i>C. M. Bender</i>	82
Source Driven Solutions of Quantum Field Theories <i>G. S. Guralnik</i>	89

Tuesday afternoon session: Thermal QCD

Organizer and Session Chairman: M. LeBellac

Effects of Multiple Scattering and Target Structure on Photon Emission <i>R. Blankenbecler</i>	101
Anomalous Electromagnetic Processes at High Temperatures <i>R. Baier</i>	107
High-Temperature Thermodynamics of QCD <i>A. Nieto</i>	113
The Quasiparticle Structure of Hot Gauge Theory <i>E. Iancu</i>	117
Hard Thermal Loops Near the Light Cone <i>A. Rebhan</i>	123

Wednesday morning session: Renormalization Group (RG) Studies

Organizer and Session Chairman: C. Wetterich

The Heavy-Quark Potential from Wilson's Exact RG Equation (paper presented not submitted) <i>Ul Ellwanger</i>	
------------------------------------------------------------------------------------------------------------------	--

Wilsonian Renormalization Group and Gauge Invariance <i>M. Bonini</i>	131
Nonperturbative Flow Equations and Low-Energy QCD <i>I.-U. Jungnickel and C. Wetterich</i>	139
Wednesday afternoon session: Intermittency and Transparency	
Organizer and Session Chairman: <i>R. C. Hwa</i>	
An Overview of Intermittency and Beyond <i>R. C. Hwa</i>	179
From Fragmentation Models to QCD Cascades <i>J.-L. Meunier</i>	184
Chaotic Gauge Fields and Their Quantization <i>G. Mandelbaum</i>	188
Color Transparency Physics: A New Domain of Strong Interactions <i>B. Pire</i>	194
Propagation of Cool Pions (paper presented not submitted) <i>R. Pisarski</i>	
Infrared Difficulties with Thermal Quantum Field Theories <i>T. Grandou</i>	200
Thursday morning session: QCD Chaos	
Organizer and Session Chairman: <i>S. Matinyan</i>	
Chaotic Behaviors of QCD Branching Processes <i>R. C. Hwa</i>	209
On the Suppression of Chaos in Quantum and Classical Physics <i>H. M. Fried</i>	215
Thermalization of Soft Fields <i>C. Greiner</i>	221
Particle Simulation of Collective Thermalization in Quark Gluon Plasma <i>J. C. Parikh</i>	229
Chaos and High-Energy Collisions <i>S. G. Matinyan</i>	235

Thursday afternoon session: Effective, Low-Energy QCDOrganizer and Session Chairman: *R. Vinh Mau*

Understanding Baryons Through Chiral Perturbation Theory <i>R. P. Springer</i>	247
Quark Confinement Due to Random Interactions <i>K. Langfeld</i>	253
Path-Integral Approach for the Anomalous Chiral Action <i>M. M. Islam</i>	260
Novel Algebraic Consequences of Chiral Symmetry <i>S. R. Beane</i>	269
An Effective Low-Momentum Gluodynamics and Spontaneous Break-down of Chiral Symmetry in Uniform Non-Abelian Gluon Field <i>J. Hosek</i>	276

Friday morning session: High-Energy ScatteringOrganizer and Session Chairman: *U. Maor*

The Hard Gluon Component of the QCD Pomeron <i>A. R. White</i>	283
Developments of the BFKL Pomeron (paper presented not submitted) <i>J. Bartels</i>	
The QCD Dipole Model: Structure Functions and Hard Interactions (paper presented not submitted) <i>R. Peschanski</i>	
Diffractive Electroproduction of Small Masses – A Test of QCD <i>E. Gotsman</i>	290
Radiatively Generated Parton Distributions (paper presented not submitted) <i>M. Glück</i>	

Friday afternoon session: Semi-Classical QCDOrganizer and Session Chairman: *L. McLerran*

Topological Mass in Four Dimensions <i>D. A. Owen</i>	301
----------------------------------------------------------	-----

Defects in Modified Axial Gauge QCD ₃₊₁	309
<i>H. W. Grießhammer</i>	
Electric-Magnetic Duality and the Heavy Quark Potential	315
<i>M. Baker</i>	
Confinement in Light-Front QCD	328
<i>M. Burkardt</i>	
Progress in Instanton Liquid Calculations	333
<i>T. Schafer</i>	
Saturday morning session: Topics in $T = 0$, Non-Perturbative QCD	
Organizer and Session Chairman: <i>J. Rafelski</i>	
Relations Between Monopoles, Instantons and Chiral Condensate	343
<i>S. Thurner</i>	
Aspects of Hamiltonian Lattice QCD	348
<i>D. Schütte</i>	
Looking for Regular Perturbations	354
<i>V. E. Rochev</i>	
The Dyson-Schwinger Equations for Heavy Quarks	362
<i>C. J. Burden</i>	
Self-Screened Parton Cascades	367
<i>B. Müller</i>	
Multiple Vacua and Boundary Conditions of Schwinger-Dyson Equations	375
<i>Z. Guralnik</i>	
Confinement and Entropy in Heavy Ion Collisions	384
<i>P. Lévai</i>	
Renormalization Group and Thermal Flavor Production in QGP	388
<i>J. Rafelski</i>	
Saturday afternoon session: Other Aspects of QCD	
Organizer and Session Chairman: <i>P. Carruthers</i>	
Covariant Solutions of the Bethe-Salpeter Equation	401
<i>A. G. Williams</i>	

Construction and Consequences of Coloured Charges in QCD 407
M. Lavelle

Wavelet Analysis of Cascade Processes
(paper presented not submitted)
P. Carruthers

List of Participants 411