Particle Production in Highly Excited Matter

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Particle Production in Highly Excited Matter

Edited by

Hans H. Gutbrod

GSI
Darmstadt, Germany
and CERN
Geneva, Switzerland

and

Johann Rafelski

University of Arizona
Tucson, Arizona

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PREFACE

Seven years after the first experiments in the new field of Nuclear Physics, the Highly Relativistic Heavy Ion Physics, the Nato-Advanced- Study-Institute on the 'Particle Production in Highly Excited Matter' was held from July 12 till July 24, 1992, at Il Ciocco, Castelveccchio Pascoli, near Lucca in Italy. The school took place at a moment when intensive efforts are mounted by the scientific community of Relativistic Heavy Ion Physics to meet the extraordinary challenge of the new upcoming physics opportunities. The gold beams of 10 GeV A at Brookhaven AGS have been sent to the experiments this Summer and we extend our congratulations to the persons and teams who made this possible. The Relativistic Heavy Ion Collider (RHIC) at Brookhaven is under construction and expected to allow experiments to see collisions in the intersection regions early 1998. The lead beams at the SPS at CERN scheduled for summer 1994 are eagerly awaited by 6 large experiments, and many scientists are planning the experiments at the planned LHC with heavy ions to be turned on before the year 2000.

Seen against this background of rather fierce activity, we were most delighted when NATO accepted our application for an Advanced Study Institute oriented to the main subject of this young and dynamic field of research. We are very grateful to the Scientific Affairs Division of NATO and Dr. L. DaCunha, the director of the Advanced Study Institute program for giving our community this opportunity. We further thank the US-DOE, NSF, German BMFT for their generous support, the INFN and in particular our Co-director, Prof. G. Bellettini, Pisa, for their active support and help with both local and technical matters. We thank the major involved research laboratories in USA and Europe, including in particular BNL, CERN, GSI, for actively supporting our Institute.

The many young scientists and graduate students who applied to attend the institute were proof that the field experiences an enormous growth and appeals to young researchers who recognize clearly the opportunities and challenges that present themselves here. The new opening to the former Warsaw block countries also contributed to considerable additional interest and numerous student applications. We apologize to all those who have been unable to attend, from East and West alike.

We follow closely the advise of NATO to hold a school rather than just another conference or workshop. We found that this was well received by the participants. Special feedback sessions in the afternoon helped to clear up details of the lectures. Several late night sessions deepened our understanding of difficult questions. We thank all those, students and lecturers alike, who found time, strength and interest to continue almost through the night.

The last vote of thanks goes to all those who have helped us: the staff of the Il Ciocco conference center and in particular Bruno, for their assistance, understanding and advise; Dr. P. Villani and the staff of INFN-PISA, for their assistance and help with the on-site computer center, secretarial and social needs; Rosemarie Audria (CERN) for her invaluable services, before, during and after the meeting. Finally we would like to acknowledge help and scientific assistance from colleagues who helped us with the scientific organization of the meeting: we particularly thank Drs: G. Bellettini (Pisa), P. Bond (BNL), M. Danos (NIST), M. Jacob (CERN), F. Plasil (ORNL), H. Rafelski, R. Thews (Arizona) as well as all the lecturers.

Hans H. Gutbrod and Johann Rafelski

October 11, 1992

CONTENTS

OVERVIEW

Big Bang in the Laboratory	1
Hans H. Gutbrod and Johann Rafelski	
Physics of the Quark-Gluon Plasma	11
B. Müller	
Physics of Relativistic Nuclear Collisions	57
I. Otterlund	
From the BEVALAC to RHIC: Recent Results and Future Perspectives	89
J.W. Harris	
Towards the LHC	117
P. Giubellino	
Low p_t Physics and Compact Detectors at RHIC and LHC	149
W. Busza	
pp and $\bar{p}p$ Collisions	159
P. Landshoff	

HOT HADRONIC MATTER

Fireball Spectra	175
U. Heinz (with E. Schnedermann and J. Sollfrank)	
Quark Matter in Equilibrium	207
F. Karsch	
Surface Energy and Chiral Interface of a Coexisting Quark-Hadron System	239
W. Bürger (with M. Faber, M. Hackel, H. Markum and M. Müller)	
Rehadronisation of the Quark-Gluon Plasma	243
J. Zimányi (with P. Lévai, B. Lukács and A. Rácz)	

TOWARDS DYNAMICAL THEORETICAL DESCRIPTION

Cascade Models and Particle Production: A Comparison	271
J. Cugnon	
Relativistic Hydrodynamics and Flavor Flow	295
L. Csernai (with L.B. Bravina and E.E. Zabrodin)	
Flavor Flow in Ultrarelativistic Nucleus–Nucleus Collisions: The RQMD Approach	335
H. Sorge (with M. Berenguer, A. Jahns, L. Winckelmann, R. Mattiello, T. Schönfeld, H. Stöcker and W. Greiner)	
Quark-Gluon Plasma Formation in Ultra-Relativistic Heavy Ion Collisions	377
K. Geiger	
Jets and High Energy Heavy Ion Collisions	387
Xin-Nian Wang	
Dynamical Approach to Pair Production from Strong Fields	397
F. Cooper	
Particle Production and Vacuum Structure in Strong Fields	427
E.D. Davis	

DIAGNOSTIC METHODS AND RECENT RESULTS

A Pedestrians Guide to Interferometry	435
W. Zajc	
Multiparticle Correlations and Fluctuations in High Energy Hadronic and Nuclear Collisions	461
P.A. Carruthers	
Meson Spectra - What we can learn from Single Particle Distributions	471
B. Jacak	
Strangeness in Ultrarelativistic Nucleus-Nucleus Collisions	499
E. Quercigh	
On the Trail of Quark-Gluon Plasma: Strange Antibaryons in Nuclear Collisions	529
J. Rafelski	
Strangeness Production in the S+Pb and p+Pb Collisions at 200 GeV/c per Nucleon	545
R. Zybert and E.G. Judd	
Physics from Photon and Lepton-Pair Spectra	555
G. Young	

Photons and Lepton Pairs – The Deep Probes of Quark-Gluon Plasma	593
P.V. Ruuskanen	
Probing the Primordial State in High Energy Heavy Ion Collisions	615
H. Satz	
Pion Dynamics and Lepton Pair Production	639
P. Koch	
Kinetics of Pre-equilibrium Parton Matter Probed by Dilepton Radiation	649
B. Kämpfer and O.P. Pavlenko	
Coherent Photon Interactions in Central and Peripheral Relativistic Heavy Ion Collisions	657
G. Baur	
Particle Production, Hadron Deconfinement and Thermodynamics in $\bar{p}$ -p Interaction	663
L. Gutay	

EPILOGUE

The Quark-Gluon Plasma: Search for the Holy Grail	669
P.A. Carruthers	
INDEX	683