

CONTENTS

	Foreword	xi
Chapter 1.	The microscopic description of the nuclear equation of state H. MÜTHER	1
Chapter 2.	Sharp transitions in nuclear dynamics: Limits to collectivity and stability M. COLONNA, M. DI TORO, V. LATORA and A. SMERZI	17
Chapter 3.	Particle–particle correlations and the space–time structure of heavy ion collisions W. BAUER	45
Chapter 4.	Two-proton correlations from heavy-ion collisions: Determining the reaction zone of Ni + Ni by the Hanbury–Brown–Twiss effect N. CINDRO, M. KOROLIJA and D. SHAPIRA	65
Chapter 5.	Near-threshold particle production: A probe for resonance matter formation in relativistic heavy ion collisions V. METAG	75
Chapter 6.	Meson production in nuclear collisions and the equation of state of hadronic matter E. GROSSE	89
Chapter 7.	Subthreshold antiproton production in heavy ion collisions A. GILLITZER, A. SCHRÖTER, E. BERDERMANN, J. HOMOLKA, P. KIENLE, W. KOENIG, B. POVH, F. SCHUMACHER and H. STRÖHER	97
Chapter 8.	η Production by proton–nucleon and proton–nucleus interactions from 800 MeV to 1.5 GeV E. CHIAVASSA, G. DELLACASA, N. DE MARCO, M. GALLIO, P. GUAITA, A. MUSSO, A. PICCOTTI, E. SCOMPARIN and E. VERCELLIN	101
Chapter 9.	The decay of the Δ -resonance in nuclear matter J. HELGESSON and P. ARVE	103

Chapter 10.	Quantum molecular dynamics and particle production in heavy ion collisions S. W. HUANG, A. FAESSLER, G. Q. LI, D. T. KHOA, E. LEHMANN, M. A. MATIN, N. OHTSUKA and R. K. PURI	105
Chapter 11.	Pion dynamics in nuclear collisions at SIS energies P. SENGER and THE KAOS COLLABORATION	115
Chapter 12.	Influence of fluctuations on dynamical simulations J. RANDRUP and G. BATKO	117
Chapter 13.	Multifragmentation: Surface instabilities or statistical decay? L. G. MORETTO, K. TSO, D. DELIS, N. COLONNA and G. J. WOZNIAK	135
Chapter 14.	Fragment and entropy production in the Au (150–800 A MeV) + Au reaction J. P. COFFIN, C. KUHN and J. KONOPKA	145
Chapter 15.	Multifragmentation, link between fission and the liquid–gas phase-transition D. H. E. GROSS	155
Chapter 16.	Disassembly of highly excited nuclei: From evaporation to vaporization W. F. J. MÜLLER, J. C. ADLOFF, M. BEGEMANN-BLAICH, P. BOUISSOU, J. HUBELE, G. IMME, I. IORI, P. KREUTZ, G. J. KUNDE, S. LERAY, V. LINDENSTRUTH, Z. LIU, U. LYNEN, R. J. MEIJER, U. MILKAU, A. MORONI, C. NGÔ, C. A. OGILVIE, J. POCHODZALLA, G. RACITI, G. RUDOLF, H. SANN, A. SCHÜTTAUF, W. SEIDEL, L. STUTTGE, W. TRAUTMANN and A. TUCHOLSKI	165
Chapter 17.	Target fragmentation in proton and heavy-ion induced reactions at high energies WA80 COLLABORATION: K. H. KAMPERT, R. ALBRECHT, T. C. AWES, P. BECKMANN, F. BERGER, M. BLOOMER, C. BLUME, D. BOCK, R. BOCK, G. CLAESSON, G. CLEWING, L. DRAGON, A. EKLUND, R. L. FERGUSON, A. FRANZ, S. GARPMAN, R. GLASOW, H. Å. GUSTAFSSON, H. H. GUTBROD, G. HÖLKER, J. IDH, P. JACOBS, B. W. KOLB, H. LÖHNER, I. LUND, F. E. OBENSHAIN, A. OSKARSSON, I. OTTERLUND, T. PEITZMANN, F. PLASIL, A. M. POSKANZER, M. PURSCHKE, H. G. RITTER, B. ROTERS, S. SAINI, R. SANTO, H. R. SCHMIDT, S. P. SØRENSEN, K. STEFFENS, P. STEINHAUSEUR, E. STENLUND, D. STÜKEN and G. R. YOUNG	171

Chapter 18.	QMD simulation of multifragment production in heavy ion collisions at $E/A=600$ MeV M. BEGEMANN-BLAICH, W. F. J. MÜLLER, J. AICHELIN, J. C. ADLOFF, P. BOUISSOU, J. HUBELE, G. IMME, I. IORI, P. KREUTZ, G. J. KUNDE, S. LERAY, V. LINDENSTRUTH, Z. LIU, U. LYNEN, R. J. MEIJER, U. MILKAU, A. MORONI, C. NGÔ, C. A. OGILVIE, J. POCHODZALLA, G. RACITI, G. RUDOLF, H. SANN, A. SCHÜTTAUF, W. SEIDEL, L. STUTTGE, W. TRAUTMANN and A. TUCHOLSKI	181
Chapter 19.	Cluster formation by a simple noise M. COLONNA, G. F. BURGIO, PH. CHOMAZ, M. DI TORO and J. RANDRUP	185
Chapter 20.	Fragment mass distribution and the reaction time scale studied by quantum molecular dynamics T. MARUYAMA, A. ONO, A. OHNISHI and H. HORIUCHI	187
Chapter 21.	Multifragment source lifetime in intermediate energy heavy ion collisions T. C. SANGSTER, M. BEGEMANN-BLAICH, TH. BLAICH, H. C. BRITT, A. ELMAANI, N. N. AJITANAND and M. N. NAMBOODIRI	189
Chapter 22.	The quantum molecular dynamics approach J. AICHELIN	191
Chapter 23.	Relativistic versus nonrelativistic quantum molecular dynamics E. LEHMANN, R. K. PURI, A. FAESSLER, T. MARUYAMA, G. Q. LI, N. OHTSUKA, S. W. HUANG, D. T. KHOA and M. A. MATIN	219
Chapter 24.	Description of heavy ion collisions with medium dependent forces A. FAESSLER	229
Chapter 25.	Relativistic kinetic calculations of heavy ion collisions with phase space dependent fields C. FUCHS, L. SEHN and H. H. WOLTER	247
Chapter 26.	Refractive scattering and reactions in the $^{16}\text{O} + ^{16}\text{O}$ system and the cold equation of state W. VON OERTZEN	257
Chapter 27.	ETA and dilepton production in heavy-ion reactions GY. WOLF, W. CASSING, W. EHEHALT and U. MOSEL	273

Chapter 28.	Heavy residue properties in intermediate energy heavy ion interactions with gold K. ALEKLETT, R. YANEZ, W. LOVELAND, A. SRIVASTAVA and J. O. LILJENZIN	297
Chapter 29.	Some collective aspects in Au+Au collisions at $E/A=150$ and 400 MeV P. DUPIEUX, FOR THE FOPI COLLABORATION	299
Chapter 30.	Formation and decay of highly excited nuclear clusters J. KONOPKA, G. PEILERT, H. STÖCKER and W. GREINER	301
Chapter 31.	The equation of state and ultrarelativistic energies in the hydrodynamic model U. KATSCHER, T. ACHENBACH, D. H. RISCHKE, A. VON KEITZ, B. WALDHAUSER, I. N. MISHUSTIN, L. M. SATAROV, J. A. MARUHN, H. STÖCKER and W. GREINER	303
Chapter 32.	Strangelets in heavy ion physics J. SCHAFFNER, A. DUMITRU, A. JAHNS, L. WINCKELMANN, R. MATTIELLO, TH. SCHÖNFELD, C. GREINER, M. BERENQUER, H. SORGE and H. STÖCKER	327
Chapter 33.	Photon and neutral meson data from the collision of 200 A • GeV sulphur ions with gold targets WA80 COLLABORATION: R. SANTO, R. ALBRECHT, T. C. AWES, P. BECKMANN, F. BERGER, M. BLOOMER, D. BOCK, R. BOCK, G. CLAESSON, G. CLEWING, R. DEBBE, L. DRAGON, A. EKLUND, R. L. FERGUSON, S. FOKIN, A. FRANZ, S. GARPMAN, R. GLASOW, H. A. GUSTAFSSON, H. H. GUTBROD, O. HANSEN, G. HÖLKER, J. IDH, M. IPPOLITOV, P. JACOBS, K. H. KAMPERT, K. KARADJEV, B. W. KOLB, A. LEBEDEV, H. LÖHNER, I. LUND, V. MANKO, B. MOSKOWITZ, F. E. OBENSHAIN, A. OSKARSSON, I. OTTERLUND, T. PEITZMANN, F. PLASIL, A. M. POSKANZER, M. PURSCHKE, H. G. RITTER, B. ROTERS, S. SAINI, H. R. SCHMIDT, S. P. SORENSEN, K. STEFFENS, P. STEINHAUSER, E. STENLUND, D. STÜKEN, A. VINOGRADOV, H. WEGENER and G. R. YOUNG	353
Chapter 34.	Heavy ion physics at the large hadron collider at CERN H. H. GUTBROD	363
Chapter 35.	Lepton pair production in relativistic heavy ion collisions at CERN SPS energies P. KOCH	373

Chapter 36.	The hadronization of a quark–gluon plasma H. W. BARZ, B. L. FRIMAN, J. KNOLL and H. SCHULZ	393
Chapter 37.	Hadron spectra and collective flow in 200 A GeV S+S collisions E. SCHNEDERMANN, J. SOLLFRANK and U. HEINZ	401
Chapter 38.	Stopping power of large nuclei at RHIC TH. SCHÖNFELD, H. STÖCKER, W. GREINER and H. SORGE	403
Chapter 39.	Who killed the J/Ψ ? R. VOGT	405
Chapter 40.	Fission of heavy hypernuclei H. NIFENECKER	407
Chapter 41.	Nuclear astrophysics with secondary (Radioactive) beams M. GAI	415
	Contents of Previous Volumes	425