Keijo Kajantie, CV 27 May 2013

Born 31.1.1940
Student: 31.5.1957, Helsingin Normaalilyseo
Military service: 15.6.1957-5.5.1958
Studies at the University of Helsinki: M.Sc. Oct 1960, Ph.D Apr 1965
Associate Professor of Physics, University of Helsinki, 1.9.1970 -, full professor 1.1.1973 - 31.1.2008 (Research Professor, Academy of Finland, 1.9.85 - 31.8.90) Adjoint Scientist, Helsinki Institute of Physics, 1.2.2008-

Longer visits abroad:

Lund, Sweden: 1.1.63 - 31.12.64 (Nordita Fellow)
CERN (total of > 7 years):

- 1.1.66 - 31.12.67 (visitor, TH Division; Finnish money),
- 1.9.69 - 31.8.70 (visitor, TH Division; Finnish money),
- 1.6.73 - 31.8.73 (corresponding fellow, TH Division; Finnish money),
- 1.9.92 - 31.8.93 (paid associate, TH division),
- 1.10.95 - 30.9.98 (staff member, TH Division).

Madison, University of Wisconsin: 1.1.75 - 10.6.75
International Center of Theoretical Physics, Santa Barbara, 20.1.92 - 20.5.92

Honors:

- Finnish Society of Sciences and Letters, Homen prize 1999
- Finnish Academy of Science and Letters, Honorary prize 2008
- Suomen Valkoisen Ruusun ritarikunnan 1. luokan ritarimerkki 1990
- Suomen Leijonan ritarikunnan Komentajamerkki 2012

Administrative positions and tasks:

- Research Institute for Theoretical Physics: Director (1.9.71-31.8.72), Chairman of the Board 1974-79, 1989-91, 1995.
- Member of the Particle Physics Committee of the Academy of Finland 1971-88, Chairman thereof 1973, 1976-82. This Committee was responsible for running the ad hoc collaboration between Finland and CERN before Finland joined CERN starting 1.1.1991.
- Finnish observer at ECFA, the European Committee for Future Accelerators, 1976-1990.
- Participation in various stages of negotiations concerning accession of Finland to CERN; member of the High Energy Physics Working Group (1987; chair P. Jauho), member of the CERN Working Group (1988-89; chair M. Lähdeoja).
- Member of LHCC, the CERN Large Hadron Collider Committee, 1.10.92-30.9.95.

- Member and Vice Chairman of the Research Council for Natural Sciences, Academy of Finland (1977-82).

- Member of the NORDITA Board 1990-92. Member of the High Energy Expert Group 1978-89.

- Chairman of the Department of Theoretical Physics (1977-94; except when on leave of absence), member of the Board of the Department of Physics (1995-2003). Director of the Division of Theoretical Physics (1995-2008).

- Member of several advisory and organization committees of international conferences, especially of the biannual Quark Matter series 1980-2001. Examples: Lattice2000, Bangalore, Lattice 2002, MIT, Pan American Study Institute 2002, EPS/HEP 2001 Budapest.

- Member of various committees and expert groups (Fusion project of VTT (1974-1988), Supercomputer committee (1981-82), Leading group of the Center of Scientific Computing (1989-93), Physics Working Group for Collaboration between Finland and Soviet Union (1978-85)).

- Editor of Zeitschrift für Physik C (1978-84), of Nuclear Physics B (1987-) and of Phys. Rev D (1998-2000).

- Refereeing activities: number of papers refereed per year is 1989 (58), 1990 (59), 1991 (39), 1992 (36), 1993 (56), 1994 (31), 1995 (30), 1996 (40), 1997 (51), 1998 (31), 1999 (11), 2000 (16), 2001 (16), 2002 (21), 2003 (18), 2004 (11), 2005 (19), 2006 (16), 2007 (11), 2008 (10) 2009 (9), 2010 (13), 2011 (9), 2012 (12). Journals are Nuclear Physics A and B, Physics Letters B, Physical Review Letters, Physical Review C and D, Journal of High Energy Physics and many others.

- Organised several conferences, among others Quark Matter 1984 in Helsinki and Strong and Electroweak Matter 2004 in Helsinki.

- Member of the board (1976), Vice chairman (1977-78) and Chairman (1979-80) of the Finnish Union of University Professors.

- Member of the Finnish Academy of Sciences 1973-, Chairman of the Section of Physics and Astronomy, 1999-2004.

- Member of The Finnish Society of Sciences and Letters 1973-, vice member of the board 1999-2005, member of the board 2005-2011 .

- Member of the Coordination group of the Graduate School for Particle and Nuclear physics, 1995 - 2007.

- Member of the ESF Holograv network (www.esf.org/holograv) Steering Committee, 2011-

Major scientific results on (numbers refer to the list of publications):

- Regge analysis of strong interactions, especially exclusive particle production reactions (6,7,13)

- Particle kinematics (16-20, the book "Particle Kinematics"with Eero Byckling (31), translated into Russian (47))

- Direct single lepton and dilepton production (49-54)

- Physics of $\gamma\gamma \to$ jets (55, 60, 61)

- Phenomenology of ultrarelativistic heavy ion collisions:

  – hydrodynamics with longitudinal (also transverse) flow (75, 76, 78, 79)

  – photon emission from QCD plasma (77)

  – dilepton emission from QCD plasma (67, 73, 86, 92, 95, 114)

  – color field model (89) and kinetics of strangeness (96)

  – deflagrations and detonations in hadronisation processes (80,88)

  – computation of the initial conditions using QCD perturbation theory + saturation (107, 112, 137, 164)

  – computing by numerical integration of the Dirac equation the rate of producing quark-antiquark pairs in very high energy heavy ion collisions (178,180)

- Theory of QCD plasma using analytic methods

  – linear response theory for screening and plasma oscillations (77)

  – damping of plasma oscillations (98, 99)

  – computation of transport coefficients (82)

  – 2-loop computation of the effective action in a constant background A_0 field (119)

  – precise 2-loop derivation of the parameters of the effective 3-dimensional theory of hot QCD plasma (152)

  – computing the last perturbatively computable term, that of order $g^6 \log g$, in the weak coupling expansion of the pressure $p(T, \mu)$ of hot QCD (174,176)

  – setting up a scheme for non-perturbative determination of the coefficient of order g^6 in $p(T, \mu)$ and carrying out the required numerical computation (179)

  – applications of gauge/gravity duality (182)-(185)

- Theory of QCD matter using numerical lattice Monte Carlo methods:

  – finite T phase transition in SU(3) gauge theory (68)

  – magnitude of the confining - deconfining interface tension at T_c (109, 116) and that of the deconfining - deconfining interface for $T \geq T_c$ in SU(3) gauge theory (121)

  – study of the A_0 condensate (120)

  – study of bubbles and nucleation in SU(3) gauge theory (126, 127)

  – first-principle determination of the screening (Debye) mass (154)

- Finite T QCD transition in the early universe

  – supercooling, bubble formation and growth (83, 97, 128, 132, 134, 141)

  – a speculative metastability transition related to the Z(3) symmetry at 10 TeV (124)

  - Finite T electroweak (EW) transition

  – bubble nucleation, wall propagation and stability (123, 130)

  – effective 3d theories of the EW transition and lattice Monte Carlo simulations thereof (131, 133, 136, 138, 139). These solve completely the phase diagram of hot EW matter.

  – detailed study of the endpoint of the first order line in the EW phase diagram (158)

  - determination of the properties of EW matter in an external (hyper)magnetic field (159)

- Solving the Ginzburg-Landau model = U(1) gauge + Higgs theory numerically
  - Phase diagram of U(1)+Higgs theory (151,156)
  - String formation in field theory of cosmological phase transitions (157)
  - Vortices in U(1)+Higgs theory (160,162)
  - Proving that this theory is dual (=essentially equal to) to a scalar theory with global U(1) symmetry near the phase transition point (177)

Ph.Ds:

Lindfors 1981, Raitio, Toimela 1985, Kärkkäinen 1990, Rummukainen 1990, Eskola 1991, Ignatius 1993, Laine 1994, Rajantie 1997, Peisa 1998, Karjalainen 1998, Vuorinen 2003, Lappi 2005, Gynther 2006, Vepsäläinen 2007, Kurkela 2008, Tahkokallio 2008, Suur-Uski 2012, Alanen 2012

Some recent grants:

- Helsinki University, FIM 188726+188865+196123 = 573714 in 1994-1996 for hiring one graduate student (mainly Mika Karjalainen).
- Academy of Finland, FIM 300000+380000+340000=1020000, 1999-2001, research grant "Elementary particle matter"(project 43989)
- Academy of Finland, FIM 240000+320000+320000+80000 = kEUR 40.4+53.8+53.8+13.5, 2002-2005, research grant "Quark gluon plasma"(project 54034)
- EU Integrated Infrastructure Initiative R113-CT-2004-506078, HadronPhysics, 40000 euros, 2005.
- Academy of Finland, EUR 74290 + 74290, 1.1.2006-31.12.2007, research grant "QCD and string theories"(project 109720)
- European Science Foundation, EUR 20000, for organising Holograv 2013 workshop

K. Kajantie: Research Publications

1. K. Kajantie, "Radiative Corrections to ep Scattering Coincidence Experiments", Ann. Acad. Sc. Fennicae, VI Physica (1965) 171.
2. K. Kajantie, "Radiative Corrections to ep Scattering Coincidence Experiments", Phys. Lett. 15 (1965) 71.
3. K. Kajantie, "G-Parity and Its Generalizations", Comm. Physico-Mathematicae 31 (1966) Number 10.
4. K. Kajantie, "Introductory SU(3) Symmetry", Lecture Notes, Research Institute for Theoretical Physics, Helsinki (1965).
5. Chan Hong-Mo, H. Högaasen and K. Kajantie, "Production Processes with Low Multiplicity", CERN Internal Report TH. 679 (1966).
6. Chan Hong-Mo, K. Kajantie, and G. Ranft "A Regge Model for High Energy Collisions Producing Three Final Particles", Nuovo Cimento 49 (1967) 157.
7. K. Kajantie and J.S. Trefil, "Suppression of the φ Photoproduction in the Quark Model", Phys. Lett. B24 (1967) 106.

8. K. Kajantie and J.S. Trefil, "The Quark Dissociation Model of Photoproduction", Nucl. Phys. B1 (1967) 648.
9. Chan Hong-Mo, K. Kajantie, G. Ranft, W. Beusch and E. Flaminio, "Double Regge Analysis of High Energy Experiments Producing Three Final Particles", Nuovo Cimento 51 (1967) 696.
10. K. Kajantie and J.S. Trefil, "Charge and Strangeness Exchange Reactions in the Quark Model", Nucl. Phys. B2 (1967) 243.
11. K. Kajantie, "On the High Energy Behaviour of the n Particle Production Cross Section in a Multi-Regge Model", Nuovo cimento 53 (1968) 424.
12. J. Finkelstein and K. Kajantie, "Total Cross-Section for n Particle Production in a Multi-Regge Model", Nuovo Cimento 56 (1968) 659.
13. J. Finkelstein and K. Kajantie, "Multiple Pomeranchuk Exchange Violates Unitarity", Phys. Lett. B26 (1968) 305.
14. J. Finkelstein and K. Kajantie, "On Total Cross Sections in the Multi-Regge Model", Proc. of the Topical Conference on High Energy Collisions of Hadrons, CERN, Geneva, 1968.
15. K. Kajantie, "Bounds for Coupling Constants in the Multi-Regge Model", Phys. Rev. 172 (1968) 1470.
16. K. Kajantie and P. Lindblom "The Physical Region on the Plane of Two Invariant Momentum Transfers for a Reaction with Three Particles in the Final State", Phys. Rev. 175 (1968) 2203.
17. F. Henyey, K. Kajantie and G. Kane "A Regge Pole Model with Cuts Generated by Absorption for the Reaction $\pi^+ n \to \omega p$", Phys. Rev. Lett. 21 (1968) 1782.
18. E. Byckling and K. Kajantie, "N-Particle Phase Space in Terms of Invariant Momentum Transfers", Nucl. Phys. B9 (1969) 568.
19. E. Byckling, M. Kaartinen, K. Kajantie and H. Villanen, "A Monte Carlo Method for Generating Peripheral Events", J. Comput. Phys. 4 (1969) 521.
20. E. Byckling and K. Kajantie, "Reductions of the Phase Space Integral in Terms of Simpler Processes", Phys. Rev. 187 (1969) 2008.
21. K. Kajantie and P.V. Ruuskanen, "A Regge Pole+Cut Model for Two Body Reactions Dominated by ρ Exchange", Nucl. Phys. B13 (1969) 437.
22. E. Byckling and K. Kajantie, "On Automatic Measuring of Bubble Chamber Pictures"(in Finnish), Arkhimedes, 14 (1969).
23. E. Byckling and K. Kajantie, "Kinematic Separation of Three-Particle Channels in Counter Experiments", Nucl. Phys. B14 (1969) 355.
24. E. Byckling and K. Kajantie, "Counter Experiments for Three-Particle Final States", Ann. Acad. Sc. Fennicae, Series A (1970) 342.
25. K. Kajantie, "B_5 Phenomenology", Proc. of the 1970 Rencontre de Moriond, Paris, 1970.
26. K. Kajantie and S. Papageorgiou, "Dual + Pomeron Analysis of $K^{\pm}p - K^{\pm}\pi^0 p$", Nucl. Phys. B22 (1970) 31.
27. K. Kajantie, "Dual Models and Dual Phenomenology", Proc. of the 1970 CERN School of Physics, Geneva, 1970.
28. K. Kajantie, "Nonresonant Multiparticle States", Proc. of the meeting on "Physics with the Omega Spectrometer", Rutherford High Energy Laboratory, 1970.
29. K. Kajantie and J. Tuominiemi, "Experimental Particle Physics in Europe during the Seventies"(in Finnish), Arkhimedes, 2 (1970).
30. K. Kajantie and V. Karimäki, "Evaluation of the Volume of the Phase Space of n Particles", Comp. Phys. Comm. 2 (1971) 207.
31. E. Byckling and K. Kajantie, *Particle Kinematics*, **textbook**, 306 pages, John D. Wiley & Sons Inc., London, 1973 ISBN 0 471 12885 6.

32. K. Kajantie and V. Karimäki, "Volume of Longitudinal Phase Space", Ann. Acad. Sci. Fenn. VI Physica, 395 (1972).
33. K. Kajantie and V. Karimäki, "Volume of Transverse-Cut Phase Space", Research Institute for Theoretical Physics, Publication TFT 25/71.
34. K. Kajantie and J. Tuominiemi, "Longitudinal Phase Space Plots in Arbitrary Frames", Physica Scripta 5 (1972) 155.
35. K. Kajantie and P.V. Ruuskanen, "Diffraction Dissociation Multiplicity Distribution", Phys. Lett. B45 (1973) 149.
36. K. Kajantie and P.V. Ruuskanen, "A Nova Model for Diffraction Dissociation with Longitudinally Decaying Novas", Proc. of the VIII Rencontre de Moriond, Paris, 1973.
37. K. Kajantie, "Introductory Material (Reggeism, Duality, etc.)", Proc. of the 1973 CERN-JINR School of Physics, Ebeltoft, Denmark, CERN 73 (1973).
38. K. Kajantie, E.H. Groot and P.V. Ruuskanen, "Distributions in a Two-Component Model with Leading Nucleons", Nucl. Phys. B71 (1974) 241.
39. K. Kajantie, S. Manninen and T. Paakkari, "Compton Profile of Aluminum", Philosophical Magazine 29 (1974) 167.
40. K. Kajantie, P.V. Ruuskanen and S. Sohlo, "Where Do Diffractive Nucleons Go", Physica Scripta 10 (1974) 207.
41. K. Kajantie and P.V. Ruuskanen, "Long Range Correlations in the Pionization Component", Nuovo Cimento Letters 11 (1974) 207.
42. J. Finkelstein and K. Kajantie, "Semi-inclusive Scaling for Large p_T Events", Phys. Lett. B26 (1968) 305.
43. K. Kajantie, C. Montonen, M. Roos and N. Törnqvist, "Strong and Electromagnetic Widths of $\psi(3105)$ in a Broken $SU(4)$ Scheme", Research Institute for Theoretical Physics, Publication TFT 3/75.
44. T. Gaisser, F. Halzen and K. Kajantie, "On the Strong Production Mechanisms and Total Cross Sections of ψ Particles", Phys. Rev. D12 (1975) 1968.
45. F. Halzen and K. Kajantie, "Systematics of Vector Meson -Proton Scattering", Phys. Lett. B56 (1975) 347.
46. F. Halzen and K. Kajantie, "Do Direct Leptons with Large Transverse Momentum Originate from ψ Production", Phys. Lett. B57 (1975) 361.
47. E. Byckling and K. Kajantie, "Kinematics of elementary particles"(translation into Russian of the **textbook 31.**), Izdatelstvo Mir, Moskva (1975).
48. K. Kajantie, "Are Gravitation, Electromagnetic, Weak and Strong Interactions Different Aspects of a Universal Interaction"(in Finnish), Proc. of the Finnish Academy of Sciences (1974).
49. K. Kajantie, "On the Contribution of Semileptonic Decays of New Particles to Single Lepton Spectra and to Dilepton Invariant Mass Distributions", Phys. Lett. B65 (1976) 69.
50. K. Kajantie, "Charmed Particles and Drell-Yan Photons as Sources of Direct Leptons", in "Many degrees of freedom in particle theory", Plenum Press, New York, 1977 (Proc. of the 1976 International Summer Institute of Theoretical Physics, Bielefeld), p. 259.
51. K. Kajantie, "Sources of Direct Leptons", invited review talk at the European Conference on Particle Physics, Budapest, 4-9 July, 1977. Proc. (ed. L. Jenik and I. Montvay) p. 467.
52. K. Kajantie and R. Raitio, "Gluon Effects in Muon Pair Production", Nucl. Phys. B139 (1978) 72.
53. K. Kajantie, J. Lindfors and R. Raitio, "QCD Angular Correlations for Muon Pair Production", Phys. Lett. B74 (1978) 384.
54. K. Kajantie, J. Lindfors and R. Raitio, "QCD Analysis of Jets Recoiling Against Large Transverse Momentum Muon Pairs", Nucl. Phys. B144 (1978) 422.

55. K. Kajantie, "Jets from $e\bar{e} \to \gamma\gamma \to q\bar{q}$", Physica Scripta 19 (1979) 230.
56. K. Kajantie, "QCD discussion of recoiling jets and angular effects in large q_T muon pair production", Physica Scripta 19 (1979) 191.
57. K. Kajantie and J. Lindfors, "Scale violating effects in large q_T muon pair production", Nucl. Phys. B146 (1978) 465.
58. K. Kajantie, "Tests of QCD in two-photon processes in very high energy e^+e^- collisions", Acta Physica Austriaca, Suppl. XXI, 663 (1979).
59. K. Kajantie, "QCD predictions for deep inelastic scattering on an electron", Phys. Lett. B83 (1979) 413.
60. K. Kajantie and R. Raitio, "Jet production in e^+e^- collisions to order α^3 and α^4 and including QCD corrections", Nucl. Phys. B159 (1979) 528.
61. K. Kajantie and R. Raitio, "Gluon jet pair production in e^+e^- initiated photon-photon collisions", Phys. Lett. B87 (1979) 133.
62. J.H. Field, K. Kajantie et al., "Tests of QCD, tagging and the equivalent photon approximation, detector design for two photon processes", Report (35 pages) from the Specialised study group on two photon physics, Hamburg, 1979.
63. J. Field, K. Kajantie and E. Pietarinen, "Characteristics of photon-photon initiated 3 jet events in QCD", Nucl. Phys. B171 (1980) 377.
64. K. Kajantie and E. Pietarinen, "Improved evolution equations for QCD", Phys. Lett. B93 (1980) 269.
65. K. Kajantie and C. Montonen, "Plasmons in classical non-Abelian gauge theories", Physica Scripta 22 (1980) 555.
66. K. Kajantie, "Topics in the theory of photon-photon processes", in Lecture Notes in Physics, vol. 134, p. 382, Springer Verlag, Berlin, 1980.
67. K. Kajantie and H.I. Miettinen, "Temperature measurement of quark-gluon plasma formed in high energy nucleus-nucleus collisions", Z. Phys. C 9 (1981) 341.
68. K. Kajantie, C. Montonen and E. Pietarinen, "Phase transition of $SU(3)$ gauge theory at finite temperature", Z. Phys. C 9 (1981) 253.
69. K. Kajantie, "Large p_T jets in photon-photon collisions", review talk at the 4th international colloquium on photon-photon interactions, Paris 6.-9.4.1981, Proc. of the Colloquium, edited by Georges W. London, published by World Scientific Publishing Co, Singapore, 1981.
70. K. Kajantie, "Collider Physics", lectures at the 1981 CERN-JINR School of Physics, CERN Yellow Report 82-04, pp. 107-151, 1982.
71. K. Kajantie and J. Kapusta, "Infrared limit of the axial gauge gluon propagator at high temperature", Phys. Lett. B110 (1982) 299.
72. K. Kajantie and J. Kapusta, "Behaviour of gluons at high temperature", Annals of Physics 160 (1985) 477.
73. K. Kajantie and H.I. Miettinen, "Muon pair production in very high energy nucleus-nucleus collisions", Z. Phys. C 14 (1982) 357.
74. K. Kajantie, "Parameters and signals for quark-gluon matter formation in nucleus-nucleus collisions", Proc. of the Workshop on Quark Matter Formation and Heavy Ion Collisions, editors M. Jacob and H. Satz, World Scientific Publishing Co, Singapore, 1982.
75. K. Kajantie and L. McLerran, "Initial conditions for hydrodynamic calculations of ultra-relativistic nuclear collisions", Phys. Lett. B119 (1982) 203.
76. K. Kajantie and L. McLerran, "Energy densities, initial conditions and hydrodynamic equations for ultra-relativistic nucleus-nucleus collisions", Nucl. Phys. B214 (1983) 261.
77. K. Kajantie and P.V. Ruuskanen, "Shielding of quark mass singularities in photon emission from hot quark-gluon plasma", Phys. Lett. B121 (1983) 352.

78. K. Kajantie and R. Raitio, "Quark-gluon plasma in ultrarelativistic nucleus-nucleus collisions", Phys. Lett. B121 (1983) 415.
79. K. Kajantie, R. Raitio and P.V. Ruuskanen, "Hydrodynamics of hadronic matter produced in ultra-relativistic nucleus-nucleus collisions", Nucl. Phys. B222 (1983) 152.
80. M. Gyulassy, K. Kajantie, H. Kurki-Suonio and L. McLerran, "Deflagrations and detonations as a mechanism of hadron bubble growth in supercooled quark-gluon plasmas", Nucl. Phys. B237 (1984) 477.
81. K. Kajantie, "Hydrodynamics and approach to equilibrium in quark-gluon plasma", Proc. of the third international conference on ultra-relativistic nucleus-nucleus collisions, editors T.W. Ludlam and H. Wegner, North Holland Publ., Amsterdam, 1983. Nucl. Phys. A418 (1984) 41c.
82. A. Hosoya and K. Kajantie, "Transport coefficients of QCD matter", Nucl. Phys. B250 (1985) 666.
83. T. DeGrand and K. Kajantie, "Supercooling, entropy production and bubble kinetics in the quark-hadron phase transition in the early universe", Phys. Lett. B147 (1984) 273.
84. K. Kajantie, "Kvarkkiaine", Arkhimedes 36 (1984) 156.
85. K. Kajantie, Editor of "Quark Matter '84, Proc. of the fourth international conference on ultra-relativistic nucleus-nucleus collisions, Helsinki, Finland, June 17-21, 1984", Springer Verlag, 1985.
86. R.C. Hwa and K. Kajantie, "Diagnosing quark matter by measuring the total entropy and the photon or dilepton emission rates", Phys. Rev. D32 (1985) 1109.
87. K. Kajantie, "Impact parameter effects in dilepton emission from quark matter", in Hadronic Matter under Extreme Conditions, Naukova Dumka, Kiev, 1986, p. 349.
88. Bengt L. Friman, K. Kajantie and P.V. Ruuskanen, "Converting mixed phase into hadrons", Nucl. Phys. B266 (1986) 468.
89. K. Kajantie and T. Matsui, "Decay of strong color electric field and thermalisation in ultra-relativistic nucleus-nucleus collisions", Phys. Lett. B164 (1985) 373.
90. R.C. Hwa and K. Kajantie, "Initial temperature and thermalisation time in heavy-ion collisions", Phys. Rev. Lett. 56 (1986) 696.
91. K. Kajantie, "Quark-hadron phase transition in the early universe", Ann. Acad. Sc. Fennicae, VI Physica (1986) 69.
92. K. Kajantie, M. Kataja, L. McLerran and P.V. Ruuskanen, "Transverse flow effects in dilepton emission", Phys. Rev. D34 (1986) 811.
93. K. Kajantie, "Superdense matter: laboratory aspects", Proc. of the second ESO-CERN symposium on Cosmology, Astronomy and Fundamental Physics, ed. G. Setti and L. van Hove, ESO Conference Proc. No. 23, ISBN 3-923524-23-4, 1986.

94. K. Kajantie, "Dilepton Production", Nucl. Phys. A461 (1987) 225C.
95. K. Kajantie, J. Kapusta, L. McLerran and A. Mekjian, "Dilepton emission and the QCD phase transition in ultrarelativistic nuclear collisions", Phys. Rev. D34 (1986) 2746.
96. K. Kajantie, M. Kataja and P.V. Ruuskanen, "Strangeness evolution in the central region of a heavy ion collision with transverse flow effects", Phys. Lett. B179 (1986) 153.
97. K. Kajantie and Hannu Kurki-Suonio, "Bubble growth and droplet decay in the quark-hadron phase transition in the early universe", Phys. Rev. D34 (1986) 1719.
98. U. Heinz, K. Kajantie and T. Toimela, "Damping of plasma oscillations in hot gluon matter", Phys. Lett. B183 (1987) 96.
99. U. Heinz, K. Kajantie and T. Toimela, "Gauge covariant linear response analysis of QCD plasma oscillations", Annals of Physics 176 (1987) 218.

100. J. Ftácnik, K. Kajantie, N. Pisútóva and J. Pisút, "On the transverse energy distributions in the central rapidity region of $^{16}0$ + Pb collisions at 200 GeV per nucleon", Phys. Lett. B188 (1987) 279.
101. K. Enqvist and K. Kajantie, "Effects of temperature dependent coupling constant evolution on the unification scale", Mod. Phys. Lett. A2 (1987) 479.
102. K. Kajantie and Larry McLerran, "Probes of the quark gluon plasma in high energy collisions", Ann. Rev. Nucl. Part. Sci. 37 (1987) 293-323.
103. H.-T. Elze, U. Heinz, K. Kajantie and T. Toimela, "High temperature gluon matter in the background gauge", Z. Phys. C37 (1988) 305-313.
104. H.-T. Elze, K. Kajantie, T. Toimela, "Chromomagnetic screening at high temperature", Z. für Physik C37 (1988) 601-608.
105. K. Kajantie, "Big bang and little bang, cosmology in the laboratory", Physica Scripta T23 (1988) 7-11.
106. K. Kajantie, "Connection between perturbation theory and lattice QCD", Z. Phys. C38 (1988) 157-160.
107. K. Kajantie, P.V. Landshoff and J. Lindfors, "Minijet production in high energy nucleus-nucleus collisions", Phys. Rev. Lett. 59 (1987) 2527-2530.
108. H.-T. Elze, K. Kajantie and J. Kapusta, "Screening and plasmon in QCD on a finite lattice", Nucl. Phys. B304 (1988) 832-849.
109. K. Kajantie and Leo Kärkkäinen, "Surface energy of the confined phase-nonconfined phase interface in QCD matter", Phys. Lett. B214 (1988) 595-600.
110. K.J. Eskola, K. Kajantie and J. Lindfors, "Perturbative thermalisation in nuclear collisions at very high energies?", Phys. Lett. B214 (1988) 613-161.
111. K. Kajantie, "Quark Matter '88, Conference Summary", Nucl. Phys. A498 (1989) 355c-366c.
112. K.J. Eskola, K. Kajantie and J. Lindfors, "Quark and gluon production in high energy nucleus-nucleus collisions", Nucl. Phys. B323 (1989) 37-52.
113. K. Kajantie, Leo Kärkkäinen and K. Rummukainen, "Interface tension and structure at T_c in the Potts model", Phys. Lett. B223 (1989) 213-217.
114. K. Kajantie and P.V. Ruuskanen, "Production of thermal dileptons in high energy nucleus-nucleus collisions", Zeitschrift für Physik C44 (1989) 167-173.
115. K.J. Eskola and K. Kajantie, "Thermal Skyrmion-like configuration", Z. Phys. C44 (1989) 347-348.
116. K. Kajantie, Leo Kärkkäinen and K. Rummukainen, "Interface tension in QCD matter", Nucl. Phys. B333 (1990) 100-119.
117. K. Kajantie, " Interfaces in QCD matter" in Multiparticle Dynamics, Festschrift for Léon Van Hove and Proc., pp. 501-510, A. Giovannini and W. Kittel, editors, World Scientific Publ. Co., Singapore, 1990.
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