RIKEN BNL Research Center

Worshop on
QCD Phase Transitions
November 4-7, 1998.
Physics Department - Large Seminar Room
Organizers: T. Schäfer and E. Shuryak

Agenda

Wednesday, November 4
Day 1: Finite temperature and baryon density

9.00	TBA	Welcome address
9.05	F. Wilczek	TBA
9.45	F. Karsch	Results on Deconfinement and Chiral Symmetry Restoration from Lattice QCD
10.30		coffee break
11.00	M. Stephanov	The phase diagram of QCD and random matrices
11.45	T. Schäfer	Extreme QCD in the instanton model
12.30		lunch break
14.00	M. Lombardo	Phase diagram of two color QCD
14.30	G. Carter	Symmetry breaking by instantons at finite density
15.00	R. Rapp	Chiral restoration at finite density: Instanton vs. Cooper pairs
15.30		coffee break
16.00	M. Alford	Imaginary chemical potential as a tool for lattice QCD
16.20	TBA	discussion, additional short contributions (1.2hr)

Thursday, November 5
Day 2: Instantons and Lattice QCD

9.00	J. Negele	Recent Insight from the Lattice into Instantons at Zero and Nonzero Temperature
9.45	P. DeForcrand	Topological and chiral properties of QCD from lattice studies
10.30		coffee break
11.00	T. DeGrand	Distribution of Instantons in Lattice QCD
11.45	A. Hasenfratz	Fermion-instanton interaction in QCD: lattice studies

12.30		lunch break
14.00	R. Mawhinney	Domain wall fermion thermodynamics
14.30	C. DeTar	Critical behavior at the high temperature QCD phase transition
15.00	I. Zahed	Chiral Disorder in QCD and Phase Transitions
15.30		coffee break
16.00	M. Wingate	SU(4) Yang-Mills theory: Phase transition and string tension
16.30	M. Engelhardt	Deconfinement in Yang-Mills theory as a vortex percolation transition
16.50	TBA	discussion, additional short contributions (1.2hr)
19.00		**Banquet at Berkner Hall**

Friday, November 6
Day 3: SUSY and large N_f

9.00	M. Strassler	More on phases in supersymmetric theories
9.45	M. Mattis	Instantons in SUSY theories
10.30		coffee break
11.00	T. Applequist	The QCD conformal phase transition
11.45	F. Sannino	From super-QCD to QCD
12.10	M. Velkovsky	Vacuum energy in large N_f QCD and instanton molecules
12.30		lunch break
14.00	J. Verbaarschot	QCD phase transitions and the spectrum of the Dirac operator
14.30	E. Gardi	The conformal window in QCD and SQCD
15.00	V. Elias	Pade summation representation of the MS beta function
15.30		coffee break
16.00	TBA	discussion, additional short contributions (1.5hr)

Saturday, November 7
Day 4: Theta Vacua and other topological phenomena

9.00	A. Zhitnitsky	Topological Defects, Baryogenesis and CP-odd Bubbles in QCD
9.45	M. Sadzikowski	Production of baryons as topological defects in chiral symmetry restoring phase transition
10.15		coffee break
10.45	D. Kharzeev	Bubbles of parity odd vacua?
11.15		lunch and discussion
12.00	E. Shuryak	Closing Remarks

Afternoon: Excursion
Evening: Dinner