

Indexes to Volume 60

SUBJECT INDEX

General Relativity and Gravitation

- Riccian from higher-dimensional space-time with D-dimensional sphere as a compact manifold and one-loop renormalization *S K Srivastava* 29–45
- Gravitational collapse in higher-dimensional charged-Vaidya space-time *Kishor D Patil* 423–431
- Bianchi type I string cosmologies *D N Pant and Sanjay Oli* 433–441
- Higher-dimensional string theory in Lyra geometry *F Rahaman, S Chakraborty, S Das, M Hossain and J Bera* 453–459
- Bianchi-IX string cosmological model in Lyra geometry *F Rahaman, S Chakraborty, N Begum, M Hossain and M Kalam* 1153–1159
- Renormalized energy-momentum tensor of $\lambda\Phi^4$ theory in curved space-time *K G Arun, Minu Joy and V C Kuriakose* 1161–1169

Mathematical Physics

- Invariance properties of the Dirac equation with external electro-magnetic field *N D Sen Gupta* 11–19

Quantum Mechanics

- Optimal entropic uncertainty relation for successive measurements in quantum information theory *M D Srinivas* 1137–1152

Particle Physics

- Hermitian quark matrices *Narendra Singh* 53–58
- Stability of extended scalar diquark stars vis-à-vis soliton stars *R S Kaushal* 461–467
- Mechanisms of supersymmetry breaking in the minimal supersymmetric standard model *Probir Roy* 169–181
- Brane world scenarios *Dileep P Jatkar* 183–188
- A review of non-commutative gauge theories *N G Deshpande* 189–198
- Standard model on D-branes *David Bailin* 199–208
- Phenomenology of radions *Katri Huitu* 209–214

The search for Higgs particles at high-energy colliders: Past, present and future	<i>Abdelhak Djouadi</i>	215–238
Measuring supersymmetry at the large hadron collider	<i>B C Allanach</i>	239–247
Results from Super-Kamiokande and K2K	<i>M R Vagins</i>	249–259
Progress in neutrino oscillation searches and their implications	<i>Srubabati Goswami</i>	261–278
Probing physics at extreme energies with cosmic ultra-high energy radiation	<i>Günter Sigl</i>	279–289
Probing grand unification with fermion masses, neutrino oscillations and proton decay	<i>Jogesh C Pati</i>	291–336
Selected topics from Belle	<i>Kazuo Abe</i>	337–344
B decays and supersymmetry	<i>Anirban Kundu</i>	345–351
CP violating rate asymmetries in B decays	<i>N G Deshpande</i>	353–362
Supersymmetry search via gauge boson fusion	<i>Anindya Datta</i>	363–368
Improving the discovery potential of charged Higgs bosons at the Tevatron and large hadron collider	<i>Stefano Moretti</i>	369–376
Sterile neutrino in a minimal three-generation see-saw model	<i>Biswajoy Brahmachari, Sandhya Choubey and Rabindra N Mohapatra</i>	377–381
Working group report: Collider and B physics	<i>Amitava Datta and K Sridhar</i>	383–394
Working group report: Beyond the standard model	<i>B Mukhopadhyaya and S Raychaudhuri</i>	395–399
Working group report: Quantum chromodynamics (QCD) and hadronic structure	<i>Rahul Basu and V Ravindran</i>	401–404
Working group report: Neutrino and astroparticle physics	<i>Raj Gandhi, Kamales Kar and S Uma Sankar</i>	405–409
Relativistic heavy-ion physics: Experimental overview	<i>Itzhak Tserruya</i>	577–592
QGP theory: Status and perspectives	<i>Steffen A Bass</i>	593–612
Photon multiplicity measurements: From SPS to RHIC and LHC	<i>Bedangadas Mohanty</i>	613–625
STAR results from the first year at RHIC	<i>Helen Caines</i>	627–638
Heavy ion collisions at collider energies – Insights from PHENIX	<i>A Drees et al</i>	639–650

Direct photon production in heavy-ion reactions at SPS and RHIC	<i>T Peitzmann</i>	651–661
Photons from quark gluon plasma and hot hadronic matter	<i>Jan-e Alam</i>	663–674
Dileptons in high-energy heavy-ion collisions	<i>Ralf Rapp</i>	675–686
A survey of lattice results on finite temperature quantum chromodynamics	<i>E Laermann</i>	687–696
Superdense matter	<i>Thomas Schäfer</i>	697–709
Can van Hove singularities be observed in relativistic heavy-ion collisions?	<i>Munshi G Mustafa and Markus H Thoma</i>	711–723
Search for deconfinement in NA49 at the CERN SPS	<i>Peter Seyboth et al</i>	725–737
Flow with photon multiplicity detector: Past and future	<i>Sudhir Raniwala</i>	739–752
Multiparticle azimuthal correlations	<i>N Borghini, P M Dinh and J-Y Ollitrault</i>	753–763
What have we learned from relativistic heavy-ion collider?	<i>Larry McLerran</i>	765–786
Status of chemical equilibrium in relativistic heavy-ion collisions	<i>J Cleymans</i>	787–794
Low- p_T proton–proton physics at low luminosity at LHC	<i>Jean-Pierre Revol</i>	795–816
Study of deconfinement in NA50	<i>Paula Bordalo et al</i>	817–828
Quarkonium suppression	<i>P Petreczky</i>	829–840
J/ψ production	<i>François Arleo, Pol-Bernard Gossiaux, Thierry Gousset and Jörg Aichelin</i>	841–850
Physics perspectives of the ALICE experiment at the large hadron collider	<i>Massimo Masera</i>	851–863
Gaseous tracking at linear hadron collider: Pushing the limits	<i>A Sharma</i>	865–875
Intriguing aspects in baryon production at relativistic heavy-ion collider	<i>Huan Zhong Huang</i>	877–885
Symmetry structure and phase transitions	<i>Ashok Goyal, Meenu Dahiya and Deepak Chandra</i>	887–900
Instability of quark matter core in a compact newborn neutron star with moderately strong magnetic field	<i>Sutapa Ghosh and Somenath Chakrabarty</i>	901–907

- Quantum chromodynamics phase transition in the early Universe and quark nuggets
Abhijit Bhattacharyya, Shibaji Banerjee, Sanjay K Ghosh, Sibaji Raha, Bikash Sinha and Hiroshi Toki 909–919
- A first look at Au+Au collisions at RHIC energies using the PHOBOS detector
Birger Back et al 921–931
- High p_T physics at STAR
Subhasis Chattopadhyay 933–944
- Single inclusive spectra, Hanburg–Brown–Twiss and elliptic flow: A consistent picture at relativistic heavy-ion collider?
William Christie 945–952
- Global variables and identified hadrons in the PHENIX experiment
John P Sullivan 953–963
- ICPAQGP 2001: Conference summary
Reinhard Stock 965–982
- Charged-particle multiplicity at mid-rapidity in Au–Au collisions at relativistic heavy-ion collider
D Silvermyr 983–986
- Event-by-event search for charged–neutral fluctuations in Pb–Pb collisions at 158 A·GeV
Madan M Aggarwal 987–992
- Event-by-event fluctuations of mean transverse momentum in Au +Au collisions in STAR experiment at relativistic heavy-ion collider
Zubayer Ahammed 993–996
- Baryon inhomogeneities due to cosmic string wakes at the quark–hadron transition
Biswanath Layek, Soma Sanyal and Ajit M Srivastava 997–1000
- Bose–Einstein condensation of anti-kaons and neutron star twins
Sarmistha Banik and Debades Bandyopadhyay 1001–1004
- Observing B -violation in relativistic heavy-ion collisions
Rajarshi Ray 1005–1009
- Identified hadron production in $\sqrt{s} = 130$ GeV Au–Au collisions at relativistic heavy-ion collider
Julia Velkovska 1011–1015
- Mechanical prototype of tracking chamber in station 2 in dimuon spectrometer of ALICE
P Bhattacharya et al 1017–1021
- Development of a honeycomb gas proportional counter array for photon multiplicity measurements in high multiplicity environment
M S Ganti et al 1023–1027
- Chiral phase transitions in quantum chromodynamics at finite temperature: Hard-thermal-loop resummed Dyson–Schwinger equation in the real time formalism
Hisao Nakkagawa, Hiroshi Yokota, Koji Yoshida and Yuko Fueki 1029–1033
- Strong-coupling diffusion in relativistic systems
Georg Wolschin 1035–1038

- Strange particle production from SIS to LHC
H Oeschler, J Cleymans and K Redlich 1039–1044
- Azimuthal anisotropy of jet quenching at LHC
I P Lokhtin, S V Petrushanko, L I Sarycheva and A M Snigirev 1045–1049
- The ALICE forward muon spectrometer
P Crochet 1051–1054
- Multi-strange-quark states at ultra-relativistic heavy-ion collisions
J P Coffin, C Kuhn, B Hippolyte, J Baudot and I Belikov 1055–1058
- Pseudorapidity distributions of charged particles in Pb–Pb collisions at super proton synchrotron energies from the NA50 experiment
Marek Idzik et al 1059–1065
- Low-mass lepton pair production in Pb–Au collisions at 40 A · GeV
Sanja Damjanović 1067–1072
- Low mass dileptons from Pb+Au collisions at 158 A · GeV
Sourav Sarkar, Jan-e Alam and T Hatsuda 1073–1077
- Photon production from quark gluon plasma at finite baryon density
D Dutta, S V S Sastry, A K Mohanty, K Kumar and R K Choudhury 1079–1082
- The extent of strangeness equilibration in quark gluon plasma
Dipali Pal, Abhijit Sen, Munshi Golam Mustafa and Dinesh Kumar Srivastava 1083–1087
- Quarkonium suppression: Gluonic dissociation vs. colour screening
Binoy Krishna Patra and Dinesh Kumar Srivastava 1089–1093
- Charged particle density distributions in Au+Au collisions at relativistic heavy-ion collider energies
Fouad Rami 1095–1098
- Possible evidence of disoriented chiral condensates from the anomaly in Ω and $\bar{\Omega}$ abundances at the super proton synchrotron
J I Kapusta and S M H Wong 1099–1102
- Analysis of one- and two-particle spectra at RHIC based on a hydrodynamical model
Tetsufumi Hirano, Kenji Morita, Shin Muroya and Chiho Nonaka 1103–1106
- Systematics of elliptic flow in heavy-ion collisions
P K Sahu, N Otuka, A Ohnishi and M Baldo 1107–1111
- Quark condensate effects on charmonium-pion scattering
F S Navarra and M Nielsen 1113–1116
- Spinodal decomposition: An alternate mechanism of phase conversion
P Shukla and A K Mohanty 1117–1120
- Simulating ultra-relativistic nuclear collisions: Screening corrections
T Pierog, H J Drescher, S Ostapchenko and K Werner 1121–1125

Nuclear Physics

- $O(12)$ limit and complete classification of symmetry schemes in proton–neutron interacting boson model *V K B Kota* 59–74
- The phenomenon of nucleon emission at high angular momentum states of fused compound systems *T R Rajasekaran, S Selvaraj and S Santhosh Kumar* 75–93
- Neutron spallation source and the Dubna Cascade Code *V Kumar, H Kumawat, Uttam Goel and V S Barashenkov* 469–481
- High-spin structure of neutron-rich Dy isotopes *A Ansari, H L Yadav, M Kaushik and U R Jakhar* 1171–1178
- Ground state structure of some double- λ hypernuclei by a three-body model using a simple coordinate space approach *S Mahapatra and J Nag* 1179–1185

Atomic and Molecular Physics

- Spectroscopic investigation of the Dergaon meteorite with reference to 10 μm and 20 μm bands *A Gohain Barua, B R Boruah, S Bhattacharyya and G D Baruah* 47–52
- Estimation of rotational temperature of $^{121}\text{Sb}^{16}\text{O}$ molecule *M B Sureshkumar, N R Shah and Ashish Jaituni* 95–98
- Momentum densities and Compton profiles of alkali-metal atoms *Pranab Sarkar, Anupam Sarkar, S N Roy and B Talukdar* 483–490
- Coplanar ($e, 3e$) differential cross-section of He atom *R Choubisa, A S Bhullar and K K Sud* 1187–1201
- Energy and angular distributions of electrons ejected from CH_4 and C_3H_8 under 16.0 keV electron impact *S Mondal, R K Singh and R Shanker* 1203–1215

Lasers and Optics

- Operational characteristics and power scaling of a transverse flow transversely excited CW CO_2 laser *Jai Khare, R Sreedhar, C P Paul, T Reghu and A K Nath* 99–107

Plasma Physics

- Thermal condensation mode in a dusty plasma *B P Pandey, J Vranješ and S Parhi* 491–498
- On the study of ion-acoustic solitary waves and double-layers in a drift multicomponent plasma with electron-inertia *S N Paul, S Chattopadhyaya, S K Bhattacharya and B Bera* 1217–1233

Condensed Matter Physics

- Characteristics of the fast electron emission produced during the cleavage of crystals
*B P Chandra, N L Patel, S S Rahangdale,
 R P Patel and V K Patle* 109–122
- Strain field due to transition metal impurities in Ni and Pd
Hitesh Sharma and S Prakash 123–141
- Correlation of thickness and magnetization in LCMO film
Sanghamitra Khatua, P K Mishra, J John and V C Sahni 499–503
- Is gadolinium a helical antiferromagnet or a collinear ferromagnet?
S N Kaul 505–511
- Effect of site disorder on the magnetic properties of weak itinerant ferromagnet $\text{Ni}_{75}\text{Al}_{25}$
Anita Semwal and S N Kaul 513–516
- Site occupancy of Fe in ternary $\text{Ni}_{75-x}\text{Fe}_{x+y}\text{Al}_{25-y}$ alloys
B Annie d'Santhoshini and S N Kaul 517–520
- Experimental observation of quantum corrections to electrical resistivity in nanocrystalline soft magnetic alloys
*K Balakrishnan,
 Y Sundarayya, M K Naidu and S N Kaul* 521–524
- Microwave dielectric tangent losses in KDP and DKDP crystals
Trilok Chandra Upadhyay and Birendra Singh Semwal 525–533
- Non-equilibrium and band tailing in organic conductors
*A T Oza,
 P C Vinodkumar and R G Patel* 535–546
- Phonon density of states in nanocrystalline ^{57}Fe
*Ranber Singh,
 S Prakash, R Meyer and P Entel* 547–556
- Lattice mechanical properties of some fcc f-shell metals
*J K Baria
 and A R Jani* 1235–1246
- Temperature dependence of dc photoconductivity in CdTe thin films
Pradip Kumar Kalita 1247–1257

Chemical Physics

- Rhythmic pattern formations in gels and Matalon–Packter law: A fresh perspective
*Jacob George, Issac Paul,
 P A Varughese and George Varghese* 1259–1271

Astronomy and Astrophysics

- Classical stochastic approach to cosmology revisited
*Moncy V John,
 C Sivakumar and K Babu Joseph* 1–10

- Maximum stellar iron core mass *F W Giacobbe* 415–422
- Cosmic ray air showers in the knee energy region *S Sanyal* 443–451
- Cosomology**
- Cosmological constant in the Bianchi type-I-modified Brans–Dicke cosmology *A K Azad and J N Islam* 21–27
- Brief Reports**
- An empirical fit to estimated neutron emission cross sections from proton induced reactions *Moumita Maiti, Maitreyee Nandy, S N Roy and P K Sarkar* 143–150
- Expressions for third-order aberration theory for holographic images *S K Tripathy and S Ananda Rao* 151–157
- Strain field due to self-interstitial impurity in Ni *Hitesh Sharma and S Prakash* 159–166
- On unitarity relations and their application to meson–antimeson mixing *G V Dass* 557–561
- The exponent $\lambda(x, Q^2)$ of the proton structure function $F_2(x, Q^2)$ at low x *D K Choudhury and P K Sahariah* 563–567
- Compton profile of tantalum *Thomas Varghese, K M Balakrishna and K Siddappa* 569–573
- Synchronized whistlers recorded at Varanasi *Rajesh Singh, Ashok K Singh and R P Singh* 1273–1277
- On the effect of a longitudinal magnetic field on oscillatory characteristics of a subnormal region in discharge in argon *D C Jana and S S Pradhan* 1279–1286
- Influence of the interplay between helicoidal magnetic ordering and superconductivity on the differential conductance in HoNi₂B₂C/Ag junctions *I N Askerzade* 1287–1291