

PHYSICAL REVIEW D

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 0556-2821)

PERIODICALS

Postmaster send address changes to:
American Institute of Physics
Suite 1NO1
2 Huntington Quadrangle
Melville, NY 11747-4502

THIRD SERIES, VOLUME 66, NUMBER 3

CONTENTS

1 AUGUST 2002

RAPID COMMUNICATIONS

- Measurement of $\mathcal{B}(B^- \rightarrow D^0 \pi^-)$ and $\mathcal{B}(\bar{B}^0 \rightarrow D^+ \pi^-)$ and isospin analysis of $\bar{B} \rightarrow D \pi$ decays (5 pages) 031101(R)
S. Ahmed *et al.* (CLEO Collaboration)
- Angular momentum mixing in crystalline color superconductivity (5 pages) 031501(R)
Ioannis Giannakis, James T. Liu, and Hai-cang Ren
- Two-gluon form factor of the nucleon and J/ψ photoproduction (5 pages) 031502(R)
L. Frankfurt and M. Strikman
- Heavy-quark axial charges to nonleading order (5 pages) 031901(R)
S. D. Bass, R. J. Crewther, F. M. Steffens, and A. W. Thomas

ARTICLES

- Study of the process $e^+ e^- \rightarrow \pi^+ \pi^- \pi^0$ in the energy region $\sqrt{s}$ from 0.98 to 1.38 GeV (16 pages) 032001
M. N. Achasov, V. M. Aulchenko, K. I. Beloborodov, A. V. Berdyugin, A. G. Bogdanchikov,
A. V. Bozhenok, A. D. Bukin, D. A. Bukin, S. V. Burdin, T. V. Dimova, V. P. Druzhinin, V. B. Golubev,
V. N. Ivanchenko, A. A. Korol, S. V. Koshuba, I. N. Nesterenko, E. V. Pakhtusova, A. A. Polunin,
A. A. Salnikov, S. I. Serednyakov, V. V. Shary, Yu. M. Shatunov, V. A. Sidorov, Z. K. Silagadze,
A. N. Skrinsky, A. G. Skripkin, Yu. V. Usov, and A. V. Vasiljev
- Measurement of the ratio of b quark production cross sections in $\bar{p}p$ collisions at $\sqrt{s}=630$ GeV
and $\sqrt{s}=1800$ GeV (8 pages) 032002
D. Acosta *et al.* (CDF Collaboration)
- Study of time-dependent CP -violating asymmetries and flavor oscillations in neutral B decays at the $\Upsilon(4S)$
(54 pages) 032003
B. Aubert *et al.* (BABAR Collaboration)
- Search for neutron-antineutron oscillations using multiprong events in Soudan 2 (11 pages) 032004
J. Chung, W. W. M. Allison, G. J. Alner, D. S. Ayres, W. L. Barrett, P. M. Border, J. H. Cobb,
H. Courant, D. M. Demuth, T. H. Fields, H. R. Gallagher, M. C. Goodman, R. Gran, T. Joffe-Minor,
T. Kafka, S. M. S. Kasahara, P. J. Litchfield, W. A. Mann, M. L. Marshak, R. H. Milburn,
W. H. Miller, L. Muallem, A. Napier, W. P. Oliver, G. F. Pearce, E. A. Peterson, D. A. Petyt, K. Ruddick,
M. Sanchez, J. Schneps, A. Sousa, B. Speakman, J. L. Thron, S. P. Wakely, and N. West
- Finding an upper limit in the presence of an unknown background (7 pages) 032005
S. Yellin
- Limits to the muon flux from WIMP annihilation in the center of the Earth with the AMANDA detector
(13 pages) 032006
J. Ahrens *et al.* (AMANDA Collaboration)
- Observation of mixing-induced CP violation in the neutral B meson system (22 pages) 032007
K. Abe *et al.* (Belle Collaboration)



Direct measurement of the W boson decay width (10 pages)	032008
V. M. Abazov <i>et al.</i> (DØ Collaboration)	
Search for time-dependent B_s^0 - $\bar{B}_s^0$ oscillations using exclusively reconstructed $D_s^\pm$ mesons (6 pages)	032009
Kenji Abe <i>et al.</i> (SLD Collaboration)	
Detection of supernova neutrinos by neutrino-proton elastic scattering (10 pages)	033001
John F. Beacom, Will M. Farr, and Petr Vogel	
Black hole detection with the OWL-Airwatch telescope (6 pages)	033002
Sharada Iyer Dutta, Mary Hall Reno, and Ina Sarcevic	
Consequences of the extra SM families on the Higgs boson production at Fermilab Tevatron and CERN LHC (6 pages)	033003
E. Arik, O. Çakır, S. A. Çetin, and S. Sultansoy	
Weak boson production amplitude zeros; equalities of the helicity amplitudes (12 pages)	033004
Fizuli Mamedov	
(μ^-, μ^+) conversion in nuclei as a probe of new physics (11 pages)	033005
Fedor Simkovic, Amand Faessler, Sergey Kovalenko, and Ivan Schmidt	
Earth effects on supernova neutrinos and their implications for neutrino parameters (8 pages)	033006
Keitaro Takahashi and Katsuhiko Sato	
Majorana mass zeros from Higgs triplet vacuum expectation values without a Majoron problem (4 pages) . . .	033007
P. H. Frampton, M. C. Oh, and T. Yoshikawa	
Power-law enhancement of neutrino mixing angles in extra dimensions (5 pages)	033008
Gautam Bhattacharyya, Srubabati Goswami, and Amitava Raychaudhuri	
Supernova neutrinos and the LSND evidence for neutrino oscillations (8 pages)	033009
Michel Sorel and Janet Conrad	
Phenomenological quark model for baryon magnetic moments and beta decay ratios (G_A/G_V) (8 pages)	033010
Jerrold Franklin	
Hybrid simulations of extensive air showers (16 pages)	033011
Jaime Alvarez-Muñiz, Ralph Engel, T. K. Gaisser, Jeferson A. Ortiz, and Todor Stanev	
Superposition effect and clan structure in forward-backward multiplicity correlations (10 pages)	034001
Alberto Giovannini and Roberto Ugoccioni	
Improved model-independent analysis of semileptonic and radiative rare B decays (19 pages)	034002
A. Ali, E. Lunghi, C. Greub, and G. Hiller	
B production asymmetries in perturbative QCD (9 pages)	034003
Eric Braaten, Yu Jia, and Thomas Mehen	
Polarization and distribution function of the Λ_b baryon (13 pages)	034004
Tsung-Wen Yeh	
Lepton pair decays of the K_L meson in the light-front model (7 pages)	034005
C. Q. Geng and C. W. Hwang	
Long distance contributions in $B \rightarrow K^* l^+ l^-$ decays with polarized K^* (6 pages)	034006
Chuan-Hung Chen and C. Q. Geng	
Identifying the quark content of the isoscalar scalar mesons $f_0(980)$, $f_0(1370)$, and $f_0(1500)$ from weak and electromagnetic processes (9 pages)	034007
Frieder Kleefeld, Eef van Beveren, George Rupp, and Michael D. Scadron	
Lepton flavor violation in tau decays (9 pages)	034008
G. Cvetič, C. Dib, C. S. Kim, and J. D. Kim	
Complete gluon bremsstrahlung corrections to the process $b \rightarrow s l^+ l^-$ (11 pages)	034009
H. H. Asatryan, H. M. Asatryan, C. Greub, and M. Walker	
Mixed kaon condensation in color-flavor locked matter (8 pages)	034010
Andrei Kryjevski and Travis Norsen	
$Z \rightarrow l^+ l^-$ and $W \rightarrow \nu_l l^+$ decays in the noncommutative standard model (5 pages)	034011
E. O. Iltan	

Muon transverse polarization in the $K_{l2\gamma}$ decay in the standard model (8 pages)	034012
V. V. Braguta, A. E. Chalov, and A. A. Likhoded	
Polyakov loops versus hadronic states (6 pages)	034013
Francesco Sannino	
Virtual photon structure functions and positivity constraints (10 pages)	034014
Ken Sasaki, Jacques Soffer, and Tsuneo Uematsu	
Forward-backward asymmetry of $B \rightarrow (\pi, K) \ell^+ \ell^-$: Supersymmetry at work (10 pages)	034015
D. A. Demir, Keith A. Olive, and M. B. Voloshin	
Low Q^2 wave functions of pions and kaons and their parton distribution functions (6 pages)	034016
C. Avila, J. C. Sanabria, and J. Magnin	
Closed-time path integral formalism and medium effects of nonequilibrium QCD matter (9 pages)	034017
Chung-Wen Kao, Gouranga C. Nayak, and Walter Greiner	
Non-Abelian topological strings and metastable states in the linear sigma model (6 pages)	034018
A. P. Balachandran and S. Digal	
Nonresonant contributions in $B \rightarrow \rho \pi$ decay (10 pages)	034019
Jusak Tandean and S. Gardner	
Critical correlations of Wilson lines in SU(3) and the high energy $\gamma^* p$ cross section (9 pages)	034020
Hans J. Pirner and Feng Yuan	
Recoil order chiral corrections to baryon octet axial vector currents and large N_c QCD (7 pages)	034021
Shi-Lin Zhu, G. Sacco, and M. J. Ramsey-Musolf	
Measuring the top-quark Yukawa coupling at hadron colliders via $t\bar{t}h, h \rightarrow W^+ W^-$ (7 pages)	034022
F. Maltoni, D. Rainwater, and S. Willenbrock	
Investigations of the πN total cross sections at high energies using a new finite-energy sum rule: $\log \nu$ or $(\log \nu)^2$ (4 pages)	034023
Keiji Igi and Muneyuki Ishida	
Parton model versus color dipole formulation of the Drell-Yan process (11 pages)	034024
Jörg Raufeisen, Jen-Chieh Peng, and Gouranga C. Nayak	
Light-meson orbital excitations in the QCD string approach (12 pages)	034025
A. M. Badalian and B. L. G. Bakker	
Light meson radial Regge trajectories (11 pages)	034026
A. M. Badalian, B. L. G. Bakker, and Yu. A. Simonov	
Nonperturbative effects from the resummation of perturbation theory (12 pages)	034027
Taekoon Lee	
Hard production in multiple parton scattering (9 pages)	034028
Giorgio Calucci and Enrico Cattaruzza	
Diffractive effects in spin-flip pp amplitudes and predictions for relativistic energies (7 pages)	034029
A. F. Martini and E. Predazzi	
Mass spectra of doubly heavy $\Omega_{QQ'}$ baryons (13 pages)	034030
V. V. Kiselev, A. K. Likhoded, O. N. Pakhomova, and V. A. Saleev	
Perturbative saturation and the soft Pomeron (13 pages)	034031
A. Kovner and U. A. Wiedemann	
Multiplicative renormalizability and quark propagator (15 pages)	034032
J. C. R. Bloch	
Local chirality of low-lying Dirac eigenmodes and the instanton liquid model (15 pages)	034501
I. Horváth, S. J. Dong, T. Draper, N. Isgur, F. X. Lee, K. F. Liu, J. McCune, H. B. Thacker, and J. B. Zhang	
Lattice artifacts and the running of the coupling constant (5 pages)	034502
Adrian Patrascioiu and Erhard Seiler	
Adjoint "quarks" on coarse anisotropic lattices: Implications for string breaking in full QCD (11 pages)	034503
Karn Kallio and Howard D. Trottier	

Instantons and the $\langle A^2 \rangle$ condensate (5 pages)	034504
Ph. Boucaud, J. P. Leroy, A. Le Yaouanc, J. Micheli, O. Pène, F. De Soto, A. Donini, H. Moutarde, and J. Rodríguez-Quintero	
Lattice QCD at finite isospin density at zero and finite temperature (8 pages)	034505
J. B. Kogut and D. K. Sinclair	
Moments of nucleon light cone quark distributions calculated in full lattice QCD (27 pages)	034506
D. Dolgov, R. Brower, S. Capitani, P. Dreher, J. W. Negele, A. Pochinsky, D. B. Renner, N. Eicker, Th. Lippert, K. Schilling, R. G. Edwards, and U. M. Heller (LHPC and SESAM Collaborations)	
Associated production of $H^\pm$ and $W^\mp$ in high-energy e^+e^- collisions in the minimal supersymmetric standard model (23 pages)	035001
Heather E. Logan and Shufang Su	
Investigation of no-scale supersymmetry breaking models with a gauged $U(1)_{B-L}$ symmetry (14 pages)	035002
Masaaki Fujii and Koshiro Suzuki	
Supersymmetric dark matter and Yukawa unification (12 pages)	035003
Utpal Chattopadhyay, Achille Corsetti, and Pran Nath	
Study of single sneutrino production in association with fermion pairs at polarized photon colliders (16 pages)	035004
Dilip Kumar Ghosh and Stefano Moretti	
Left-right symmetry in 5D and neutrino mass in TeV-scale gravity models (11 pages)	035005
R. N. Mohapatra and A. Pérez-Lorenzana	
Flat manifold leptogenesis in the supersymmetric standard model (9 pages)	035006
Masato Senami and Katsuji Yamamoto	
Quark-squark alignment reexamined (12 pages)	035007
Yosef Nir and Guy Raz	
Flavor physics and fine-tuning in theory space (6 pages)	035008
R. Sekhar Chivukula, Nick Evans, and Elizabeth H. Simmons	
Exploring flavor structure of supersymmetry breaking at B factories (15 pages)	035009
Toru Goto, Yasuhiro Okada, Yasuhiro Shimizu, Tetsuo Shindou, and Minoru Tanaka	
Noncommutativity and unitarity violation in gauge boson scattering (14 pages)	036001
J. L. Hewett, F. J. Petriello, and T. G. Rizzo	
Scaling laws and effective dimension in lattice $SU(2)$ Yang-Mills theory with a compactified extra dimension (7 pages)	036002
Shinji Ejiri, Shouji Fujimoto, and Jisuke Kubo	
Debye screening at finite temperature reexamined (8 pages)	036003
R. A. Schneider	
Forced tunneling and turning state explosion in pure Yang-Mills theory (17 pages)	036004
D. M. Ostrovsky, G. W. Carter, and E. V. Shuryak	
Radiative corrections to Kaluza-Klein masses (16 pages)	036005
Hsin-Chia Cheng, Konstantin T. Matchev, and Martin Schmaltz	
String models of glueballs and the spectrum of $SU(N)$ gauge theories in $2+1$ dimensions (12 pages)	036006
Robert W. Johnson and Michael J. Teper	
Black hole, string ball, and p -brane production at hadronic supercolliders (11 pages)	036007
Kingman Cheung	
p -brane production in the fat brane or universal extra dimension scenario (5 pages)	036008
Kingman Cheung and Chung-Hsien Chou	

BRIEF REPORTS

Neutrino mass from triplet and doublet scalars at the TeV scale (2 pages)	037301
Ernest Ma	

Charm mass corrections to the bottomonium mass spectrum (<i>3 pages</i>)	037501
D. Ebert, R. N. Faustov, and V. O. Galkin	
Cluster percolation and chiral phase transition (<i>4 pages</i>)	037502
Matteo Beccaria and Antonio Moro	
Search for $^1P_1$ charmonium in B decay (<i>4 pages</i>)	037503
Mahiko Suzuki	
Mass insertion approximation without squark degeneracy (<i>4 pages</i>)	037701
Guy Raz	
On the possibility of a very light A^0 at low $\tan\beta$ in the minimal supersymmetric standard model (<i>4 pages</i>) . .	037702
A. G. Akeroyd, S. Baek, Gi-Chol Cho, and K. Hagiwara	
Classical sum rules and spin correlations in photoabsorption and photoproduction processes (<i>4 pages</i>)	037901
Iván Schmidt and Alfonso R. Zerwekh	

ERRATA

Erratum: Supernova neutrino oscillations: A simple analytical approach [Phys. Rev. D 65 , 073008 (2002)] (<i>1 page</i>)	039901(E)
G. L. Fogli, E. Lisi, D. Montanino, and A. Palazzo	
Erratum: Strange form factors in the context of the SAMPLE, HAPPEX, and A4 experiments [Phys. Rev. D 65 , 014016 (2002)] (<i>1 page</i>)	039902(E)
António Silva, Hyun-Chul Kim, and Klaus Goeke	
Erratum: Expectation values of four-quark operators in pions [Phys. Rev. D 65 , 074015 (2002)] (<i>1 page</i>) . . .	039903(E)
E. G. Drukarev, M. G. Ryskin, V. A. Sadovnikova, and Amand Faessler	
Cumulative Author Index	i