

PHYSICAL REVIEW C

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 0556-2813)

PERIODICALS
Postmaster send address changes to:
American Institute of Physics
500 Sunnyside Boulevard
Woodbury, NY 11797-2999

THIRD SERIES, VOLUME 55, NUMBER 1

CONTENTS

JANUARY 1997

Information for Contributors to Physical Review C	iii
Editorial Policies and Practices of Physical Review C	ix
Guidelines for Estimating Length for Physical Review C	xii

RAPID COMMUNICATIONS

Magnetic rotation in the ^{105}Sn nucleus	R1
A. Gadea, G. de Angelis, C. Fahlander, M. De Poli, E. Farnea, Y. Li, D. R. Napoli, Q. Pan, P. Spolaore, D. Bazzacco, S. M. Lenzi, S. Lunardi, C. M. Petrache, F. Brandolini, P. Pavan, C. Rossi Alvarez, M. Sferrazza, P. G. Bizzeti, A. M. Bizzeti Sona, J. Nyberg, M. Lipoglavsek, J. Persson, J. Cederkäll, D. Seweryniak, A. Johnson, H. Grawe, F. Soramel, M. Ogawa, A. Makishima, R. Schubart, and S. Frauendorf	
Elastic two-neutron transfer reactions of $^{58}\text{Ni} + ^{60}\text{Ni}$ and $^{62}\text{Ni} + ^{64}\text{Ni}$ around the Coulomb barrier	R5
Y. Sugiyama, Y. Tomita, Y. Yamanouti, S. Hamada, T. Ikuta, H. Fujita, and D. R. Napoli	
Elucidating halo structure by β decay: $\beta\gamma$ from the ^{11}Li decay	R8
M. J. G. Borge, H. Fynbo, D. Guillemaud-Mueller, P. Hornshøj, F. Humbert, B. Jonson, T. E. Leth, G. Martínez-Pinedo, T. Nilsson, G. Nyman, A. Poves, I. Ramos-Lerate, K. Riisager, G. Schrieder, M. Smedberg, O. Tengblad, and the ISOLDE Collaboration	
Spin asymmetries from $^{16}\text{O}(\vec{\gamma}, p\pi^-)$ near Δ resonance energies	R12
K. Hicks, H. Baghaei, A. Caracappa, A. Cichocki, G. Davenport, R. Finlay, V. Gladyshev, T. Gresko, S. Hoblit, M. Khandaker, O. Kistner, F. X. Lee, R. Lindgren, M. Lucas, L. Miceli, B. Norum, J. Rapaport, A. Sandorfi, R. Sealock, L. C. Smith, C. Thorn, S. Thornton, C. S. Whisnant, and L. E. Wright	
Near- and sub-barrier $^{12}\text{C} + ^{232}\text{Th}$ fission fragment anisotropies	R16
J. P. Lestone, A. A. Sonzogni, M. P. Kelly, and D. Prindle	

ARTICLES

Nucleon-Nucleon Interaction, Few-Body Systems

Spin-transfer measurements of the $\pi\vec{d} \rightarrow \vec{p}p$ reaction at energies spanning the Δ resonance	19
A. Feltham, G. Jones, R. Olszewski, M. Pavan, M. Sevier, R. P. Trelle, P. Weber, G. J. Lolos, E. L. Mathie, Z. Papandreou, R. Rui, D. Gill, D. Healey, D. Ottewell, G. Sheffer, G. R. Smith, V. Sossi, G. Wait, and P. Walden	
Cross sections and analyzing powers A_y in the breakup reaction $^2\text{H}(\vec{p}, pp)n$ at 65 MeV: Star configurations	42
J. Zejma, M. Allet, K. Bodek, J. Lang, R. Müller, S. Navert, O. Naviliat-Cuncic, J. Sromicki, E. Stephan, L. Jarczyk, St. Kistryn, J. Smyrski, A. Strzałkowski, W. Glöckle, J. Golak, D. Hüber, H. Witała, and P. A. Schmelzbach	
Nonlinear approach to NN interactions using self-interacting meson fields	57
L. Jäde and H. V. von Geramb	
Regularization, renormalization, and range: The nucleon-nucleon interaction from effective field theory	67
Thomas D. Cohen	
Cascade calculation of hadronic hydrogen atoms	73
T. P. Terada and R. S. Hayano	



0556-2813(199701)55:1;1-L

(Continued)

Elastic pion scattering on the deuteron in a multiple scattering model	88
S. S. Kamalov, L. Tiator, and C. Bennhold	
Coherent π^0 and η photoproduction on the deuteron	98
S. S. Kamalov, L. Tiator, and C. Bennhold	
Nuclear Structure	
High-spin states in ^{76}Br	111
D. F. Winchell, L. Wehner, J. X. Saladin, M. S. Kaplan, E. Landulfo, and A. Aprahamian	
^{101}Tc produced by the ($^3\text{He},pn\gamma$) reaction	120
D. G. Savage, Hurol Aslan, Ben Crowe, Tim Dague, Sadek Zeghib, F. A. Rickey, and P. C. Simms	
Determination of the ^{29}Si level density from 3 to 22 MeV	133
F. B. Bateman, S. M. Grimes, N. Boukharouba, V. Mishra, C. E. Brient, R. S. Pedroni, T. N. Massey, and R. C. Haight	
Pseudospin doublet aligned structure in doubly odd ^{186}Ir	144
M. A. Cardona, M. E. Debray, G. García Bermúdez, D. Hojman, A. J. Kreiner, H. Somacal, A. Burlon, J. Davidson, M. Davidson, G. Levinton, M. Ozafrán, M. Vázquez, D. R. Napoli, J. Rico, D. Bazzacco, R. Burch, D. De Acuña, S. M. Lenzi, N. Medina, C. Rossi Alvarez, N. Blasi, G. Lo Bianco, J. de Boer, D. Frischke, and H. J. Maier	
Structure of superdeformed bands in ^{195}Hg	148
G. Hackman, R. Krücken, R. V. F. Janssens, M. A. Deleplanque, M. P. Carpenter, D. Ackermann, I. Ahmad, H. Amro, S. Asztalos, D. J. Blumenthal, R. M. Clark, R. M. Diamond, P. Fallon, S. M. Fischer, B. Herskind, T. L. Khoo, T. Lauritsen, I-Y. Lee, R. W. MacLeod, A. O. Macchiavelli, D. Nisius, G. J. Schmid, F. S. Stephens, K. Vetter, and R. Wyss	
M1 bands and intruder bands in ^{113}In	155
R. S. Chakrawarthy and R. G. Pillay	
Effective interaction for relativistic theory of nuclear structure	167
L. N. Savushkin, S. Marcos, M. L. Quelle, P. Bernardos, V. N. Fomenko, and R. Niembro	
Calculation of shell model energies for states in ^{210}Bi	179
Petr Alexa, Jan Kvasil, Nguyen Viet Minh, and Raymond K. Sheline	
Full pf shell study of $A=47$ and $A=49$ nuclei	187
G. Martínez-Pinedo, A. P. Zuker, A. Poves, and E. Caurier	
Correlations of the deformation variables β and γ in even-even Hf, W, Os, Pt, and Hg nuclei	206
L. Esser, U. Neuneyer, R. F. Casten, and P. von Brentano	
Mixtures of F -spin symmetries in Sm isotopes	211
S. T. Hsieh and H. C. Chiang	
Neck formation and deformation effects in a preformed cluster model of exotic cluster decays	218
Satish Kumar and Raj K. Gupta	
Nuclear Reactions	
Excitation energies and temperatures of hot nuclei produced in the reactions of $^{63}\text{Cu}+^{197}\text{Au}$ at 35A MeV	227
R. Wada, R. Tezkratt, K. Hagel, F. Haddad, A. Kolomiets, Y. Lou, J. Li, M. Shimooka, S. Shlomo, D. Utley, B. Xiao, N. Mdeiwayeh, J. B. Natowitz, Z. Majka, J. Cibor, T. Kozik, and Z. Sosin	
Multiple hadron production in electron scattering off nuclear targets	244
O. Benhar, S. Fantoni, G. I. Lykasov, and N. V. Slavin	
Inelastic nucleon contributions in (e,e') nuclear response functions	253
T. C. Ferrée and D. S. Koltun	
Study of the violent collisions between $^{63}\text{Cu}+^{232}\text{Th}$ at 35 MeV/nucleon	264
J. Cibor, Z. Majka, T. Kozik, P. Staszal, Z. Sosin, K. Hagel, J. Li, L. Lou, R. Tezkratt, D. Utley, R. Wada, B. Xiao, and J. B. Natowitz	

Validity of the linear coupling approximation in heavy-ion fusion reactions at sub-barrier energies	276
K. Hagino, N. Takigawa, M. Dasgupta, D. J. Hinde, and J. R. Leigh	
Missing monopole strength in ^{58}Ni and uncertainties in the analysis of α -particle scattering	285
G. R. Satchler and Dao T. Khoa	
Nuclear and Coulomb contributions to $^{6,8}\text{He} + \text{Si}$ dissociation reactions at low energy	298
Robert E. Warner	
Quasielastic knockout of alpha clusters by intermediate energy protons: Signatures of virtually excited states	302
Alexander A. Sakharuk and Vladimir Zelevinsky	
Quasifree pion electroproduction from nuclei in the Δ region	318
Frank X. Lee, C. Bennhold, and Louis E. Wright	
Inclusive transverse response of nuclear matter	338
Adelchi Fabrocini	
Effect of the two-body currents in the $^2\text{H}(p,n)$ reaction	349
Chang-Yong Lee	

Relativistic/Ultrarelativistic Nuclear Collisions

Dispersion theory of proton Compton scattering in the first and second resonance regions	359
A. I. L'vov, V. A. Petrun'kin, and M. Schumacher	
Particle production at high energy. I. Geometrical orientated simulation of hadron-hadron collisions below 250 GeV/c	378
Chia C. Shih and Jing-ye Zhang	
Particle production at high energy. II. Accumulative impact and clustering in relativistic heavy-ion collisions	384
Chia C. Shih and Jing-ye Zhang	
Hydrodynamical description of 200A GeV/c S+Au collisions: Hadron and electromagnetic spectra	392
Josef Sollfrank, Pasi Huovinen, Markku Kataja, P. V. Ruuskanen, Madappa Prakash, and Raju Venugopalan	
Influence of the in-medium pion dispersion relation in heavy ion collisions	411
C. Fuchs, L. Sehn, E. Lehmann, J. Zipprich, and Amand Faessler	

Subnucleon Aspects of Nuclei/Physics of Hadrons

Dirac-Foldy term and the electromagnetic polarizability of the neutron	419
M. Bawin and S. A. Coon	
Generalized polarizabilities and the spin-averaged amplitude in virtual Compton scattering off the nucleon	424
D. Drechsel, G. Knöchlein, A. Metz, and S. Scherer	
Strangeness in the nucleon on the light cone	431
W. Melnitchouk and M. Malheiro	
Charge symmetry breaking in the valence quark distributions of the nucleon	441
C. J. Benesh and T. Goldman	
Electromagnetic properties of the $\Delta(1232)$	448
A. J. Buchmann, E. Hernández, and Amand Faessler	
Analysis of recent π^+p low-energy differential cross-section measurements	464
N. Fettes and E. Matsinos	

Electroweak Interaction, Symmetries

Experimental search for double- β decay of ^{100}Mo	474
M. Alston-Gamjost, B. L. Dougherty, R. W. Kenney, R. D. Tripp, J. M. Krivicich, H. W. Nicholson, C. S. Sutton, B. D. Dieterle, S. D. Foltz, C. P. Leavitt, R. A. Reeder, J. D. Baker, and A. J. Caffrey	

Nuclear Astrophysics

Neutrino oscillations and moments of electron spectra	494
J. N. Bahcall, P. I. Krastev, and E. Lisi	

BRIEF REPORTS

Dilepton and photon decay of giant resonances built on excited states of ^{56}Ni	504
A. Buda, J. C. Bacelar, S. R. Banerjee, H. Ching, D. J. Hofman, P. Paul, S. Schadmand, and A. van der Woude	
High- K three-quasiparticle rotational bands in ^{171}Hf	508
D. M. Cullen, D. E. Appelbe, A. T. Reed, C. Baktash, and C.-H. Yu	
Collective structures in doubly odd ^{120}I	512
H. Kaur, J. Singh, A. Sharma, J. Goswamy, D. Mehta, N. Singh, P. N. Trehan, E. S. Paul, and R. K. Bhowmik	
Binary channels of the ^{19}F -on- ^{12}C reaction at 92 MeV	516
N. Aissaoui, F. Haas, R. M. Freeman, C. Beck, A. Morsad, B. Djerroud, R. Caplar, and A. Hachem	
Superdeformed band in ^{130}Ce	519
J. N. Wilson, G. C. Ball, M. Cromaz, T. E. Drake, S. Flibotte, A. Galindo-Uribarri, J. de Graff, G. Hackman, S. M. Mullins, J. M. Nieminen, V. P. Janzen, D. C. Radford, J. C. Waddington, and D. Ward	
Connection between the nuclear matter mean-field equation of state and the quark and gluon condensates at high density	521
M. Malheiro, Mira Dey, A. Delfino, and Jishnu Dey	
No evidence for large charge-symmetry breaking effects in the ^3P_J nucleon-nucleon interactions	525
W. Tornow, A. Kievsky, S. Rosati, and M. Viviani	
Intermittency as a signal of criticality in multifragmentation studies	528
Yu. Murin, R. Ghetti, and B. Jakobsson	
Enhancement of the isovector $M1$ strength in ^{28}Si due to meson exchange currents	532
P. von Neumann-Cosel, A. Richter, Y. Fujita, and B. D. Anderson	
Low-energy $^7\text{Li}(n, \gamma_0)^8\text{Li}$ and $^7\text{Li}(p, \gamma_0)^8\text{Be}$ cross sections	535
F. C. Barker	
S-matrix and R -matrix determination of the low-energy ^5He and ^5Li resonance parameters	536
Attila Csóto and G. M. Hale	
New parametrization for the Lagrangian density of relativistic mean field theory	540
G. A. Lalazissis, J. König, and P. Ring	

COMMENTS

Comment on "Pre-equilibrium particle emission and critical exponent analysis"	544
J. B. Elliott, J. A. Hauger, A. S. Hirsch, E. L. Hjort, N. T. Porile, R. Scharenberg, B. K. Srivastava, M. Tincknell, and P. Warren	
Reply to "Comment on 'Pre-equilibrium particle emission and critical exponent analysis' "	546
Wolfgang Bauer and Alexander Botvina	

Selected Abstracts from Physical Review D	548
Cumulative Author Index	550