

# Gerald A Miller

## List of Publications by Year in descending order

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168  
papers

6,595  
citations

61984

43  
h-index

69250

77  
g-index

169  
all docs

169  
docs citations

169  
times ranked

2362  
citing authors

#	ARTICLE	IF	CITATIONS
1	Charge symmetry, quarks and mesons. <i>Physics Reports</i> , 1990, 194, 1-116.	25.6	432
2	Pionic corrections to the MIT bag model: The (3,3) resonance. <i>Physical Review D</i> , 1980, 22, 2838-2852.	4.7	357
3	Cloudy bag model of the nucleon. <i>Physical Review D</i> , 1981, 24, 216-229.	4.7	308
4	Muonic Hydrogen and the Proton Radius Puzzle. <i>Annual Review of Nuclear and Particle Science</i> , 2013, 63, 175-204.	10.2	283
5	A survey of pion charge-exchange reactions with nuclei. <i>Annals of Physics</i> , 1976, 100, 562-606.	2.8	259
6	Nucleon-nucleon correlations, short-lived excitations, and the quarks within. <i>Reviews of Modern Physics</i> , 2017, 89, .	45.6	234
7	Charge Densities of the Neutron and Proton. <i>Physical Review Letters</i> , 2007, 99, 112001.	7.8	222
8	Pion-nucleon scattering in the Brown-Rho bag model. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1980, 91, 192-195.	4.1	166
9	The cloudy bag model. IV. Pionic corrections to the nucleon properties. <i>Canadian Journal of Physics</i> , 1982, 60, 59-72.	1.1	142
10	Coherent nuclear diffractive production of minijets "illuminating color transparency. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1993, 304, 1-7.	4.1	123
11	Light front cloudy bag model: Nucleon electromagnetic form factors. <i>Physical Review C</i> , 2002, 66, .	2.9	121
12	Charge Symmetry Breaking and QCD. <i>Annual Review of Nuclear and Particle Science</i> , 2006, 56, 253-292.	10.2	121
13	$pp \rightarrow pp\pi^0$ reaction near threshold: A chiral power counting approach. <i>Physical Review C</i> , 1996, 53, 2661-2673.	2.9	117
14	Transverse Charge Densities. <i>Annual Review of Nuclear and Particle Science</i> , 2010, 60, 1-25.	10.2	116
15	Geometrical Color Optics of Coherent High-Energy Processes. <i>Annual Review of Nuclear and Particle Science</i> , 1994, 44, 501-560.	10.2	113
16	Role of color neutrality in nuclear physics: Modifications of nucleonic wave functions. <i>Physical Review C</i> , 1996, 54, 920-935.	2.9	107
17	THE EMC EFFECT AND HIGH MOMENTUM NUCLEONS IN NUCLEI. <i>International Journal of Modern Physics E</i> , 2013, 22, 1330017.	1.0	85
18	Hadrons in the nuclear medium. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2003, 29, R1-R45.	3.6	79

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19	Q2independence of QF2/F1, Poincaré invariance, and the nonconservation of helicity. Physical Review C, 2002, 65, .	2.9	76
20	Realistic transverse images of the proton charge and magnetization densities. Physical Review C, 2011, 83, .	2.9	73
21	Disentangling Explanations of Deep-Inelastic Lepton-Nucleus Scattering by Lepton-Pair Production. Physical Review Letters, 1984, 53, 2532-2535.	7.8	72
22	Defining the proton radius: A unified treatment. Physical Review C, 2019, 99, .	2.9	72
23	Measurement of Nuclear Transparency for the $Ae$ $\epsilon^2$ $f_{\text{trans}}(Q^2)$	7.8	67
24	Charge-Symmetry Breaking in Neutron-Proton Elastic Scattering. Physical Review Letters, 1986, 56, 2567-2570.	7.8	66
25	Electromagnetic Self-Energy Contribution to $M_p$ $\hat{a}^2$ $M_p$ the Isovector Nucleon Magnetic Polarizability. Physical Review Letters, 2012, 108, 232301.	7.8	65
26	Observation of the Charge Symmetry Breaking $d+d^+$ $^4\text{He}+^4\text{He}$ Reaction Near Threshold. Physical Review Letters, 2003, 91, 142302.	7.8	60
27	Nucleonic contribution to Lepton-nucleus deep inelastic scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1988, 200, 351-356.	4.1	56
28	Quark-meson coupling model for finite nuclei. Physical Review C, 1996, 54, 359-370.	2.9	56
29	Six-Quark Cluster Components of Nuclear Wave Functions and the Pion-Nucleus Double-Charge-Exchange Reaction. Physical Review Letters, 1984, 53, 2008-2011.	7.8	54
30	Isospin-symmetry-breaking corrections to superallowed Fermi $I^2$ decay: Formalism and schematic models. Physical Review C, 2008, 78, .	2.9	54
31	Energy dependence of color transparency. Physical Review D, 1991, 44, 692-703.	4.7	52
32	Charge symmetry violation in $pn^+$ $d^+$ and chiral effective field theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 493, 65-72.	4.1	52
33	Shapes of the proton. Physical Review C, 2003, 68, .	2.9	51
34	Nucleon form factors and spin content in a quark-diquark model with a pion cloud. Physical Review C, 2012, 86, .	2.9	50
35	Nucleon charge symmetry breaking and parity violating electron-proton scattering. Physical Review C, 1998, 57, 1492-1505.	2.9	48
36	Electrophobic Scalar Boson and Muonic Puzzles. Physical Review Letters, 2016, 117, 101801.	7.8	48

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37	Positive pion production by 185 MeV protons. Nuclear Physics A, 1974, 224, 269-300.	1.5	47
38	Isospin-symmetry-breaking corrections to superallowed Fermi $\beta$ decay: Radial excitations. Physical Review C, 2009, 80, .	2.9	47
39	Chiral Solitons in Nuclei: Saturation, EMC Effect, and Drell-Yan Experiments. Physical Review Letters, 2003, 91, 212301.	7.8	46
40	Validity of the Weizsäcker-Williams approximation and the analysis of beam dump experiments: Production of an axion, a dark photon, or a new axial-vector boson. Physical Review D, 2017, 96, .	4.7	46
41	Charge-symmetry breaking in neutron-proton elastic scattering. Physical Review C, 1987, 36, 1956-1967.	2.9	45
42	QCD Rescattering and High Energy Two-Body Photodisintegration of the Deuteron. Physical Review Letters, 2000, 84, 3045-3048.	7.8	44
43	Microscopic optical potential from chiral nuclear forces. Physical Review C, 2013, 88, .	2.9	44
44	Proton polarizability contribution: Muonic hydrogen Lamb shift and elastic scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 718, 1078-1082.	4.1	43
45	Correlated fermions in nuclei and ultracold atomic gases. Physical Review C, 2015, 92, .	2.9	43
46	Can nuclear physics explain the anomaly observed in the internal pair production in the Beryllium-8 nucleus?. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 773, 159-165.	4.1	41
47	Quantum Opacity, the RHIC Hanbury Brown-Twiss Puzzle, and the Chiral Phase Transition. Physical Review Letters, 2005, 94, 102302.	7.8	40
48	Electromagnetic form factors and charge densities from hadrons to nuclei. Physical Review C, 2009, 80, .	2.9	39
49	Toward a resolution of the proton size puzzle. Physical Review A, 2011, 84, .	2.5	39
50	Survey of charge symmetry breaking operators for $d \rightarrow p + \pi^0$ . Physical Review C, 2004, 69, .	2.9	38
51	Pionic contributions to deep inelastic nuclear structure functions. Physical Review C, 1990, 41, 659-664.	2.9	37
52	Return of the EMC effect: Finite nuclei. Physical Review C, 2002, 65, .	2.9	37
53	Forces within hadrons on the light front. Physical Review D, 2021, 103, .	4.7	37
54	Return of the EMC effect. Physical Review C, 2001, 65, .	2.9	36

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55	Generalized parton distributions and double distributions for $qq\bar{q}$ -pions. Physical Review D, 2003, 67, .	4.7	36
56	Singular charge density at the center of the pion?. Physical Review C, 2009, 79, .	2.9	36
57	Microscopic optical potential for exotic isotopes from chiral effective field theory. Physical Review C, 2016, 93, .	2.9	36
58	Pionic and hidden-color, six-quark contributions to the deuteron $\chi$ function. Physical Review C, 2014, 89, .	4.1	35
59	Nonperturbative treatment of gluons and pseudoscalar mesons in baryon spectroscopy. Physical Review C, 1996, 53, R2038-R2042.	2.9	34
60	Charge-symmetry breaking forces and isospin mixing in $^8\text{Be}$ . Physical Review C, 2013, 88, .	2.9	34
61	Validity of the Weizsäcker-Williams approximation and the analysis of beam dump experiments: Production of a new scalar boson. Physical Review D, 2017, 95, .	4.7	33
62	Quarks and the deuteron asymptotic D state. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1984, 134, 15-20.	4.1	31
63	$NN\bar{n}$ -reaction near threshold in a chiral power counting approach. Physical Review C, 2000, 61, .	2.9	30
64	Exploring skewed parton distributions with two-body models on the light front. II. Covariant Bethe-Salpeter approach. Physical Review D, 2002, 65, .	4.7	30
65	Coherent QCD phenomena in the coherent pion-nucleon and pion-nucleus production of two jets at high relative momenta. Physical Review D, 2002, 65, .	4.7	30
66	Realistic few-body physics in the $^3\text{He}$ nucleus. Physical Review C, 2011, 83, .	4.1	30
67	Third Zemach moment of the proton. Physical Review C, 2011, 83, .	2.9	30
68	Testing hydrodynamic descriptions of p+p collisions at $\sqrt{s}=7$ TeV. European Physical Journal C, 2016, 76, 1.	3.9	29
69	Isobar dynamics and pion-nucleus elastic scattering. Nuclear Physics A, 1982, 389, 457-491.	1.5	28
70	Exposing novel quark and gluon effects in nuclei. Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 093001.	3.6	28
71	Generalized parton distributions for $qq\bar{q}$ -pions. Physical Review D, 2003, 67, .	4.7	27
72	Taming the Pion Cloud of the Nucleon. Physical Review Letters, 2012, 108, 172001.	7.8	27

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73	Current algebra and the cloudy-bag model. <i>Physical Review D</i> , 1986, 33, 817-829.	4.7	26
74	Proton Electromagnetic-Form-Factor Ratios at Low $Q^2$ . <i>Physical Review Letters</i> , 2008, 101, 082002.	7.8	26
75	Color transparency in (p, pp) reactions. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1993, 318, 7-13.	4.1	25
76	Precocious dominance of point-like configurations in hadronic form factors. <i>Nuclear Physics A</i> , 1993, 555, 752-764.	1.5	25
77	Perturbative Pion Wave Function in Coherent Pion-Nucleon Di-Jet Production. <i>Foundations of Physics</i> , 2000, 30, 533-542.	1.3	25
78	Nonperturbative relativistic calculation of the muonic hydrogen spectrum. <i>Physical Review A</i> , 2011, 84, .	2.5	25
79	Color transparency and high-energy (p,2p) nuclear reactions. <i>Physical Review C</i> , 1992, 45, 1863-1870.	2.9	23
80	Short range correlations and the isospin dependence of nuclear correlation functions. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2018, 785, 304-308.	4.1	23
81	Unified formalism for electromagnetic and gravitational probes: Densities. <i>Physical Review D</i> , 2022, 105, .	4.7	23
82	Handling the handbag diagram in Compton scattering on the proton. <i>Physical Review C</i> , 2004, 69, .	2.9	21
83	Frame-independent spatial coordinate $z_{\perp}$ : Implications for light-front wave functions, deep inelastic scattering, light-front holography, and lattice QCD calculations. <i>Physical Review C</i> , 2020, 102, .	2.9	21
84	Can a protophobic vector boson explain the ATOMKI anomaly?. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2021, 813, 136061.	4.1	21
85	Six quark cluster effects and binding energy differences between mirror nuclei. <i>Physical Review C</i> , 1985, 31, 602-612.	2.9	20
86	Double distributions for the proton. <i>Physical Review D</i> , 2004, 70, .	4.7	20
87	Pion transverse charge density from timelike form factor data. <i>Physical Review D</i> , 2011, 83, .	4.7	20
88	Extracting many-body color charge correlators in the proton from exclusive DIS at large Bjorken $x$ . <i>Physical Review D</i> , 2018, 98, .	4.7	20
89	Can long-range nuclear properties be influenced by short range interactions? A chiral dynamics estimate. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 793, 360-364.	4.1	20
90	Charge symmetry breaking in the $n \rightarrow p + \pi^0$ reaction. <i>Physical Review C</i> , 2010, 81, .	2.9	19

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91	Role of nucleon strangeness in supernova explosions. <i>Physical Review C</i> , 2016, 93, .	2.9	19
92	Quark model of the $\pi^+p \rightarrow \pi^+pn$ reaction. <i>Physical Review C</i> , 1987, 36, 2450-2458.	2.9	18
93	Chiral limit of nuclear physics. <i>Physical Review C</i> , 1997, 56, 3307-3310.	2.9	17
94	Study of lattice QCD form factors using the extended Gari-KrÄ¼mpelmann model. <i>Physical Review C</i> , 2005, 72, .	2.9	17
95	Comparison of nucleon form factors from lattice QCD against the light front cloudy bag model and extrapolation to the physical mass regime. <i>Physical Review C</i> , 2005, 71, .	2.9	17
96	Toy model for pion production in nucleon-nucleon collisions. <i>Physical Review C</i> , 2001, 63, .	2.9	16
97	Constraining nucleon strangeness. <i>Physical Review C</i> , 2015, 91, .	2.9	16
98	Polishing the lens: I. Pionic final state interactions and HBT correlations: distorted wave emission-function (DWEF) formalism and examples. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2007, 34, 703-739.	3.6	15
99	Complex conjugate poles and parton distributions. <i>Physical Review D</i> , 2003, 68, .	4.7	14
100	Even parity $\Lambda$ pentaquark and stable antistrange nuclear matter. <i>Physical Review C</i> , 2004, 70, .	2.9	13
101	Pion transverse charge density and the edge of hadrons. <i>Physical Review C</i> , 2014, 90, .	2.9	12
102	Short-range correlations and the charge density. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 790, 484-489.	4.1	12
103	Shapes of the nucleon. <i>Physical Review C</i> , 2006, 73, .	2.9	11
104	Nucleon-nucleon charge symmetry breaking and the $d \rightarrow \pi^+ n$ reaction. <i>Physical Review C</i> , 2009, 80, .	2.9	11
105	Charge symmetry breaking and parity violating electron-proton scattering. <i>Physical Review C</i> , 2014, 89, .	2.9	11
106	Chiral light-front perturbation theory and the flavor dependence of the light-quark nucleon sea. <i>Physical Review C</i> , 2019, 100, .	2.9	11
107	Realizing vector meson dominance with transverse charge densities. <i>Physical Review C</i> , 2011, 84, .	2.9	10
108	Genuine empirical pressure within the proton. <i>Physical Review D</i> , 2021, 104, .	4.7	10

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109	High-energy nuclear quasielastic reactions: Decisive tests of nuclear-binding/pion models of the European Muon Collaboration effect. <i>Physical Review Letters</i> , 1992, 68, 17-20.	7.8	9
110	Resonant relativistic corrections and the A problem. <i>Physical Review C</i> , 2007, 76, .	2.9	9
111	Non-Spherical Shapes of the Proton: Existence, Measurement, and Computation. <i>Nuclear Physics News</i> , 2008, 18, 12-16.	0.4	8
112	Neutron charge density from simple pion cloud models. <i>Physical Review C</i> , 2009, 80, .	2.9	8
113	Nuclear quasielastic electron scattering limits nucleon off-mass shell properties. <i>Physical Review C</i> , 2012, 86, .	2.9	8
114	Euclidean bridge to the relativistic constituent quark model. <i>Physical Review C</i> , 2017, 95, .	2.9	8
115	Coherent-nuclear pion photoproduction and neutron radii. <i>Physical Review C</i> , 2019, 100, .	2.9	8
116	Eta decay and muonic puzzles. <i>Nuclear Physics B</i> , 2019, 944, 114638.	2.5	8
117	Bayesian analysis of light-front models and the nucleon's charmed sigma term. <i>Physical Review D</i> , 2017, 96, .	4.7	7
118	Non-universal and universal aspects of the large scattering length limit. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2018, 777, 442-446.	4.1	7
119	Confinement in Nuclei and the Expanding Proton. <i>Physical Review Letters</i> , 2019, 123, 232003.	7.8	7
120	Implications of the nuclear EMC effect. <i>European Physical Journal A</i> , 2007, 31, 578-584.	2.5	6
121	Basis light-front quantization for a chiral nucleon-pion Lagrangian. <i>Physical Review C</i> , 2020, 101, .	2.9	6
122	Mystery of Bloom-Gilman duality: A light-front holographic QCD perspective. <i>Physical Review D</i> , 2021, 103, .	4.7	6
123	Color transparency and the proton form factor: Evidence for the Feynman mechanism. <i>Physical Review C</i> , 2021, 104, .	2.9	6
124	Confinement in two-dimensional QCD and the infinitely long pion. <i>Physical Review D</i> , 2022, 105, .	4.7	6
125	Multiple-scattering series for color transparency. <i>Physical Review D</i> , 1993, 47, 1865-1878.	4.7	5
126	Pion-only, chiral light-front model of the deuteron. <i>Physical Review C</i> , 2002, 65, .	2.9	5

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127	Polarized lepton-nucleon elastic scattering and a search for a light scalar boson. <i>Physical Review C</i> , 2015, 92, .	2.9	5
128	Clustering coefficients of protein-protein interaction networks. <i>Physical Review E</i> , 2007, 75, 051910.	2.1	4
129	Understanding the optical potential in Hanbury-Brown&Twiss interferometry. <i>Physical Review C</i> , 2008, 78, .	2.9	4
130	Short-range correlations and the nuclear EMC effect in deuterium and helium-3. <i>Physical Review Research</i> , 2021, 3, .	3.6	4
131	Kaon transverse charge density from space- and timelike data. <i>Physical Review C</i> , 2017, 96, .	2.9	3
132	Unified model of nucleon elastic form factors and implications for neutrino-oscillation experiments. <i>Physical Review D</i> , 2020, 102, .	4.7	3
133	Discovery versus precision in nuclear physics: A tale of three scales. <i>Physical Review C</i> , 2020, 102, .	2.9	3
134	Relation between the deuteron form factor at high momentum transfer and the high energy neutron-proton scattering amplitude. <i>Physical Review C</i> , 2004, 69, .	2.9	2
135	Proton charge extensions. <i>Physical Review A</i> , 2016, 93, .	2.5	2
136	Quarks fuse to release energy. <i>Nature</i> , 2017, 551, 40-41.	27.8	2
137	Pions in proton structure and everywhere else. <i>Physical Review D</i> , 2022, 105, .	4.7	2
138	INTRODUCTION TO COLOR TRANSPARENCY. <i>International Journal of Modern Physics E</i> , 1992, 01, 629-664.	1.0	1
139	INFINITE NUCLEAR MATTER ON THE LIGHT FRONT: A MODERN APPROACH TO BRUECKNER THEORY. <i>International Journal of Modern Physics B</i> , 2001, 15, 1551-1557.	2.0	1
140	THE INCLUSIVE&EXCLUSIVE CONNECTION AND THE NEUTRON NEGATIVE CENTRAL CHARGE DENSITY. <i>International Journal of Modern Physics E</i> , 2009, 18, 1809-1824.	1.0	1
141	Hidden Color and the $b_1$ Structure Function of the Deuteron. <i>Few-Body Systems</i> , 2015, 56, 319-324.	1.5	1
142	Meaning of the nuclear wave function. <i>Physical Review C</i> , 2016, 94, .	2.9	1
143	Color Transparency and Light-Front Holographic QCD. <i>Physics</i> , 2022, 4, 590-596.	1.4	1
144	Field theory treatment of Pi-nucleus scattering. <i>AIP Conference Proceedings</i> , 1976, , .	0.4	0

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145	Nucleon-nucleon correlations and elastic pion double charge-exchange reactions. AIP Conference Proceedings, 1976, , .	0.4	0
146	Understanding the cloudy bag model. AIP Conference Proceedings, 1984, , .	0.4	0
147	The nuclear Drell-Yan process. AIP Conference Proceedings, 1985, , .	0.4	0
148	Overview of charge symmetry. AIP Conference Proceedings, 1995, , .	0.4	0
149	Color transparency and spin effects in $(e, e'p)$ reactions. AIP Conference Proceedings, 1995, , .	0.4	0
150	Color transparency—color coherent effects in nuclear physics. , 1997, , .		0
151	Nuclear physics on the light front—a new old way to do an old new problem. , 1999, , .		0
152	Light front calculations of nucleon form factors. Nuclear Physics, Section B, Proceedings Supplements, 2006, 161, 185.	0.4	0
153	Physical Nucleon Form Factors from Lattice QCD. AIP Conference Proceedings, 2006, , .	0.4	0
154	Chiral symmetry restoration, pion opacity, and the RHIC HBT puzzle. AIP Conference Proceedings, 2006, , .	0.4	0
155	Elliptic flow from final state interactions in the distorted-wave emission-function model. Physical Review C, 2009, 79, .	2.9	0
156	Travels with Tony—nucleon structure through our ages. , 2010, , .		0
157	What's New with the Neutron and Proton. Few-Body Systems, 2012, 52, 357-366.	1.5	0
158	Color transparency. , 2013, , .		0
159	Luneburg-lens-like structural Pauli attractive core of the nuclear force at short distances. Nuclear Physics A, 2018, 975, 73-76.	1.5	0
160	Ernest Henley's isospin and the ensuing progress. International Journal of Modern Physics E, 2018, 27, 1840005.	1.0	0
161	INFINITE NUCLEAR MATTER ON THE LIGHT FRONT: A MODERN APPROACH TO BRUECKNER THEORY. , 2000, , .		0
162	Light Front Nuclear Theory and the HERMES Effect. , 2001, , .		0

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163	LIGHT FRONT TREATMENT OF THE DEUTERON. , 2002, , .		0
164	THE ELECTROMAGNETIC FORM FACTORS OF THE PROTON AND NEUTRON: FUNDAMENTAL INDICATORS OF NUCLEON STRUCTURE. , 2002, , .		0
165	Relativity, Chiral Symmetry, and the Nucleon Electromagnetic Form Factors. Few-Body Systems, 2003, , 207-218.	0.2	0
166	HADRONS IN THE NUCLEAR MEDIUM- ROLE OF LIGHT FRONT NUCLEAR THEORY. , 2003, , .		0
167	MESON CLOUDS AND NUCLEON ELECTROMAGNETIC FORM FACTORS. , 2008, , .		0
168	Color Correlations in the Proton. , 2020, , .		0