

# Vladimir A Bashkirov

## List of Publications by Year in descending order

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133  
papers

4,215  
citations

101543

36  
h-index

128289

60  
g-index

133  
all docs

133  
docs citations

133  
times ranked

4601  
citing authors

#	ARTICLE	IF	CITATIONS
1	Exclusive photoproduction of $J/\psi$ mesons at HERA. European Physical Journal C, 2002, 24, 345-360.	3.9	270
2	Conceptual design of a proton computed tomography system for applications in proton radiation therapy. IEEE Transactions on Nuclear Science, 2004, 51, 866-872.	2.0	177
3	Measurement of the proton structure function $F_2$ at very low $Q^2$ at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 487, 53-73.	4.1	155
4	Measurement of the $F_2$ structure function in deep inelastic $e^+p$ scattering using 1994 data from the ZEUS detector at HERA. Zeitschrift für Physik C-Particles and Fields, 1996, 72, 399-424.	1.5	137
5	Density resolution of proton computed tomography. Medical Physics, 2005, 32, 1035-1046.	3.0	135
6	Measurement of the proton structure function $F_2$ and at low and very low $x$ at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 407, 432-448.	4.1	129
7	A scintillating bolometer for experiments on double beta decay. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 420, 109-113.	4.1	94
8	Measurement of elastic $\pi^0$ photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 437, 432-444.	4.1	94
9	production in deep inelastic scattering at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 407, 402-418.	4.1	91
10	The performance of a novel ion-counting nanodosimeter. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 492, 212-235.	1.6	81
11	Measurement of elastic $\eta$ photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 377, 259-272.	4.1	80
12	Evaluation of lesion clustering in irradiated plasmid DNA. International Journal of Radiation Biology, 2005, 81, 41-54.	1.8	79
13	Measurement of the cross section for the reaction $\hat{I}^3p \hat{\alpha}^+ J/\psi^- p$ with the ZEUS detector at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 350, 120-134.	4.1	78
14	Development of a head scanner for proton CT. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 699, 205-210.	1.6	73
15	Extraction of the gluon density of the proton at $x$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 345, 576-588.	4.1	70
16	A Fast Experimental Scanner for Proton CT: Technical Performance and First Experience With Phantom Scans. IEEE Transactions on Nuclear Science, 2016, 63, 52-60.	2.0	67
17	Dijet cross sections in photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 348, 665-680.	4.1	66
18	Exclusive $\pi^0$ production in deep inelastic electron-proton scattering at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 356, 601-616.	4.1	66

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19	Observation of jet production in deep inelastic scattering with a large rapidity gap at HERA. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1994, 332, 228-243.	4.1	63
20	Novel scintillation detector design and performance for proton radiography and computed tomography. <i>Medical Physics</i> , 2016, 43, 664-674.	3.0	63
21	A nanodosimetric model of radiation-induced clustered DNA damage yields. <i>Physics in Medicine and Biology</i> , 2010, 55, 761-781.	3.0	58
22	Experimental comparison of proton CT and dual energy x-ray CT for relative stopping power estimation in proton therapy. <i>Physics in Medicine and Biology</i> , 2019, 64, 165002.	3.0	58
23	Diffraction hard photoproduction at HERA and evidence for the gluon content of the pomeron. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1995, 356, 129-146.	4.1	56
24	Rapidity gaps between jets in photoproduction at HERA. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 369, 55-68.	4.1	56
25	Dijet photoproduction at HERA and the structure of the photon. <i>European Physical Journal C</i> , 2002, 23, 615-631.	3.9	55
26	Water-equivalent path length calibration of a prototype proton CT scanner. <i>Medical Physics</i> , 2012, 39, 2438-2446.	3.0	55
27	Proton radiography for clinical applications. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 612, 571-575.	1.6	52
28	Measurement of exclusive $\gamma$ electroproduction at HERA. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2000, 487, 273-288.	4.1	51
29	Software platform for simulation of a prototype proton CT scanner. <i>Medical Physics</i> , 2017, 44, 1002-1016.	3.0	48
30	Development of proton computed tomography detectors for applications in hadron therapy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 809, 120-129.	1.6	47
31	Toward Proton Computed Tomography. <i>IEEE Transactions on Nuclear Science</i> , 2004, 51, 3-9.	2.0	44
32	Measurement of azimuthal asymmetries in deep inelastic scattering. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2000, 481, 199-212.	4.1	42
33	Study of $D_s^*$ production in ep collisions at HERA. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1995, 349, 225-237.	4.1	39
34	Measurement of the reaction in deep inelastic e+p scattering at HERA. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 380, 220-234.	4.1	38
35	Issues in Proton Computed Tomography. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2003, 511, 275-281.	1.6	37
36	200 MeV Proton Radiography Studies With a Hand Phantom Using a Prototype Proton CT Scanner. <i>IEEE Transactions on Medical Imaging</i> , 2014, 33, 875-881.	8.9	37

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37	Inclusive charged particle distributions in deep inelastic scattering events at HERA. Zeitschrift für Physik C-Particles and Fields, 1996, 70, 1-15.	1.5	35
38	Measurement of inclusive prompt photon photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 472, 175-188.	4.1	35
39	Measurement of inclusive ( $D_s^\pm$ ) photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 481, 213-227.	4.1	34
40	An evaluation of spatial resolution of a prototype proton CT scanner. Medical Physics, 2016, 43, 6291-6300.	3.0	34
41	Measurement of Charged and Neutral Current $e^+p$ Deep Inelastic Scattering Cross Sections at High $Q^2$ . Physical Review Letters, 1995, 75, 1006-1011.	7.8	33
42	Dijet angular distributions in direct and resolved photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 384, 401-413.	4.1	33
43	Measurement of dijet production in neutral current deep inelastic scattering at high $Q^2$ and determination of $\hat{\sigma}_{\pm}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 507, 70-88.	4.1	33
44	Operation of the preclinical head scanner for proton CT. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 831, 394-399.	1.6	33
45	Inclusive jet differential cross sections in photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 342, 417-432.	4.1	32
46	Observation of events with an energetic forward neutron in deep inelastic scattering at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 384, 388-400.	4.1	32
47	Dijet production in neutral current deep inelastic scattering at HERA. European Physical Journal C, 2002, 23, 13-27.	3.9	32
48	Measurement of multiplicity and momentum spectra in the current fragmentation region of the Breit frame at HERA. Zeitschrift für Physik C-Particles and Fields, 1995, 67, 93-107.	1.5	31
49	Initial studies on proton computed tomography using a silicon strip detector telescope. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 514, 215-223.	1.6	30
50	Study of the photon remnant in resolved photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 354, 163-177.	4.1	29
51	Searches for excited fermions in ep collisions at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 549, 32-47.	4.1	29
52	Prototype Tracking Studies for Proton CT. IEEE Transactions on Nuclear Science, 2007, 54, 140-145.	2.0	29
53	Nanodosimetry-based quality factors for radiation protection in space. Zeitschrift für Medizinische Physik, 2008, 18, 286-296.	1.5	28
54	Study of the effective transverse momentum of partons in the proton using prompt photons in photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 511, 19-32.	4.1	27

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55	Comparison of energy flows in deep inelastic scattering events with and without a large rapidity gap. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 338, 483-496.	4.1	26
56	Measurement of $\hat{I}_{\pm}$ s from jet rates in deep inelastic scattering at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 363, 201-216.	4.1	26
57	Observation of hard scattering in photoproduction events with a large rapidity gap at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 346, 399-414.	4.1	25
58	Observation of isolated high-ET photons in photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 413, 201-216.	4.1	25
59	Event shape analysis of deep inelastic scattering events with a large rapidity gap at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 421, 368-384.	4.1	25
60	The effect of beam purity and scanner complexity on proton CT accuracy. Medical Physics, 2017, 44, 284-298.	3.0	25
61	The impact of secondary fragments on the image quality of helium ion imaging. Physics in Medicine and Biology, 2018, 63, 195016.	3.0	25
62	Wall-less Ion-counting Nanodosimetry Applied to Protons. Radiation Protection Dosimetry, 2002, 99, 325-330.	0.8	24
63	Measurement of three-jet distributions in photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 443, 394-408.	4.1	23
64	High-mass dijet cross sections in photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 531, 9-27.	4.1	23
65	Stopping power accuracy and achievable spatial resolution of helium ion imaging using a prototype particle CT detector system. Current Directions in Biomedical Engineering, 2017, 3, 401-404.	0.4	23
66	First attempts at prediction of DNA strand-break yields using nanodosimetric data. Radiation Protection Dosimetry, 2006, 122, 451-454.	0.8	22
67	W production and the search for events with an isolated high-energy lepton and missing transverse momentum at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 471, 411-428.	4.1	21
68	Results from a Prototype Proton-CT Head Scanner. Physics Procedia, 2017, 90, 209-214.	1.2	21
69	Prediction of image noise contributions in proton computed tomography and comparison to measurements. Physics in Medicine and Biology, 2019, 64, 145016.	3.0	21
70	Measurement of dijet cross sections for events with a leading neutron in photoproduction at HERA. Nuclear Physics B, 2001, 596, 3-29.	2.5	20
71	Differential cross sections of photoproduction in ep collisions at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 401, 192-206.	4.1	19
72	A silicon telescope for applications in nanodosimetry. IEEE Transactions on Nuclear Science, 2002, 49, 1724-1727.	2.0	19

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73	Monte Carlo Studies of a Proton Computed Tomography System. IEEE Transactions on Nuclear Science, 2007, 54, 1487-1491.	2.0	19
74	Development of a single ion detector for radiation track structure studies. Journal of Instrumentation, 2016, 11, C09021-C09021.	1.2	19
75	A novel approach to study radiation track structure with nanometer-equivalent resolution. European Physical Journal D, 2014, 68, 1.	1.3	18
76	Application of fluence field modulation to proton computed tomography for proton therapy imaging. Physics in Medicine and Biology, 2017, 62, 6026-6043.	3.0	18
77	Ion-counting nanodosimeter with particle tracking capabilities. Radiation Protection Dosimetry, 2006, 122, 415-419.	0.8	17
78	Improving single-event proton CT by removing nuclear interaction events within the energy/range detector. Physics in Medicine and Biology, 2019, 64, 15NT01.	3.0	15
79	A novel detector for 2D ion detection in low-pressure gas and its applications. , 2009, , .		13
80	A scintillator-based approach to monitor secondary neutron production during proton therapy. Medical Physics, 2016, 43, 5915-5924.	3.0	13
81	Particle-Tracking Proton Computed Tomography Data Acquisition, Preprocessing, and Preconditioning. IEEE Access, 2021, 9, 25946-25958.	4.2	13
82	A search for excited fermions in electron-proton collisions at HERA. Zeitschrift für Physik C-Particles and Fields, 1995, 65, 627-647.	1.5	12
83	Multiplicity moments in deep inelastic scattering at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 510, 36-54.	4.1	12
84	YAG(Ce) crystal characterization with proton beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 654, 349-353.	1.6	12
85	Characterisation of a track structure imaging detector. Radiation Protection Dosimetry, 2015, 166, 223-227.	0.8	12
86	Observation of scaling violations in scaled momentum distributions at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 414, 428-443.	4.1	11
87	Development of Proton Computed Tomography for Applications in Proton Therapy. , 2009, , .		11
88	Proof of concept image artifact reduction by energy-modulated proton computed tomography (EMpCT). Physica Medica, 2021, 81, 237-244.	0.7	11
89	Measurement of diffractive production of $D^{\pm}$ mesons in deep-inelastic scattering at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 545, 244-260.	4.1	10
90	Detector development for Proton Computed Tomography (pCT). , 2011, , .		10

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91	The role of Monte Carlo simulation in understanding the performance of proton computed tomography. Zeitschrift Fur Medizinische Physik, 2022, 32, 23-38.	1.5	10
92	Mapping the sensitive volume of an ion-counting nanodosimeter. Journal of Instrumentation, 2006, 1, P04004-P04004.	1.2	9
93	Accuracy of low-dose proton <sc>CT</sc> image registration for pretreatment alignment verification in reference to planning proton <sc>CT</sc>. Journal of Applied Clinical Medical Physics, 2019, 20, 83-90.	1.9	9
94	Experimental Validation of Track Structure Models. IEEE Transactions on Nuclear Science, 2009, 56, 2859-2863.	2.0	8
95	Properties of hadronic final states in diffractive deep inelastic scattering at DESY HERA. Physical Review D, 2002, 65, .	4.7	7
96	The particle tracking silicon microscope PTSM. IEEE Transactions on Nuclear Science, 2004, 51, 2032-2036.	2.0	7
97	Nanodosimetric cluster size distributions of therapeutic proton beams. IEEE Transactions on Nuclear Science, 2006, 53, 532-538.	2.0	7
98	Design and construction of the 1st proton CT scanner. AIP Conference Proceedings, 2013, , .	0.4	7
99	Search for lepton-flavor violation in $e^+p$ collisions at DESY HERA. Physical Review D, 2002, 65, .	4.7	6
100	Proton computed tomography: Update on current status. , 2007, , .		6
101	Search for selectron and squark production in $e^+p$ collisions at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 434, 214-230.	4.1	5
102	Silicon Microdosimetry in Heterogeneous Materials: Simulation and Experiment. IEEE Transactions on Nuclear Science, 2006, 53, 3738-3744.	2.0	5
103	The Effect of Tissue Inhomogeneities on the Accuracy of Proton Path Reconstruction for Proton Computed Tomography. , 2009, , .		5
104	Beam test results of a CsI calorimeter matrix element. Journal of Instrumentation, 2010, 5, P06001-P06001.	1.2	5
105	Space carving and filtered back-projection as preconditioners for proton computed tomography reconstruction. , 2012, , .		5
106	Dosimetry system for the irradiation of thin biological samples with therapeutic proton beams. Physics in Medicine and Biology, 2002, 47, 409-420.	3.0	4
107	Proton Radiography Studies for Proton CT. , 2006, , .		4
108	Development of a range counter with SiPM readout for proton CT. , 2012, , .		4

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109	Comparative accuracy and resolution assessment of two prototype proton computed tomography scanners. Medical Physics, 2022, 49, 4671-4681.	3.0	4
110	Particle identification by relativistic rise of time above threshold in gaseous detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 433, 560-563.	1.6	3
111	200 MeV proton radiography studies with a hand phantom using a prototype proton CT scanner. , 2012, , .		3
112	Results from a pre-clinical head scanner for proton CT. , 2014, , .		3
113	Incorporating robustness in diagonally-relaxed orthogonal projections method for proton computed tomography. , 2015, , .		3
114	Dosimetric evaluation of proton CT using a prototype proton CT scanner. , 2016, , .		3
115	Characteristics of proton CT images reconstructed with filtered backprojection and iterative projection algorithms. , 2009, , .		2
116	Track reconstruction with the silicon strip tracker of the proton CT Phase 2 scanner. , 2014, , .		2
117	Characterization of secondary neutron production during proton therapy. , 2014, , .		2
118	Measurement of neutrons and photons produced during proton therapy. , 2015, , .		2
119	Detailed Monte Carlo Investigation of a Proton Computed Tomography System. , 0, , .		1
120	Prototype Tracking Studies for Proton CT. , 0, , .		1
121	Monte Carlo simulations for the development a clinical proton CT scanner. , 2012, , .		1
122	A Highly Accelerated Parallel Multi-GPU based Reconstruction Algorithm for Generating Accurate Relative Stopping Powers. , 2017, , .		1
123	Robust iterative methods: Convergence and applications to proton computed tomography. AIP Conference Proceedings, 2019, , .	0.4	1
124	TH-D-BRC-09: A Status Update On the Development of Proton CT at Loma Linda University Medical Center. Medical Physics, 2009, 36, 2813-2813.	3.0	1
125	Energy Measurements in a Prototype Proton CT Scanner. AIP Conference Proceedings, 2007, , .	0.4	0
126	Residual energy measurements for proton computed tomography. , 2007, , .		0



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127	Experimental verification of track structure models. , 2008, , .		0
128	Spatial resolution studies for a prototype proton CT scanner. , 2014, , .		0
129	Particle tracking for hadron therapy with plasma panel sensors: A Monte Carlo simulation study. , 2015, , .		0
130	Abstract ID: 138 Fluence modulated proton computed tomography. Physica Medica, 2017, 42, 29-30.	0.7	0
131	Computed tomography with a low-intensity proton flux: results of a Monte Carlo simulation study. , 2004, , .		0
132	TH-D-BRD-07: Nanodosimetry as a Tool for Predicting the RBE of Therapeutic Proton Beams. Medical Physics, 2009, 36, 2808-2809.	3.0	0
133	SU-E-T-350: Calibration of a Prototype Proton CT Scanner. Medical Physics, 2011, 38, 3568-3568.	3.0	0