

# Vladimir A Bashkirov

## List of Publications by Year in descending order

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papers

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101543

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133  
docs citations

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times ranked

4601  
citing authors

#	ARTICLE	IF	CITATIONS
1	The role of Monte Carlo simulation in understanding the performance of proton computed tomography. <i>Zeitschrift Fur Medizinische Physik</i> , 2022, 32, 23-38.	1.5	10
2	Comparative accuracy and resolution assessment of two prototype proton computed tomography scanners. <i>Medical Physics</i> , 2022, 49, 4671-4681.	3.0	4
3	Proof of concept image artifact reduction by energy-modulated proton computed tomography (EMpCT). <i>Physica Medica</i> , 2021, 81, 237-244.	0.7	11
4	Particle-Tracking Proton Computed Tomographyâ€”Data Acquisition, Preprocessing, and Preconditioning. <i>IEEE Access</i> , 2021, 9, 25946-25958.	4.2	13
5	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
6	Improving single-event proton CT by removing nuclear interaction events within the energy/range detector. <i>Physics in Medicine and Biology</i> , 2019, 64, 15NT01.	3.0	15
7	Prediction of image noise contributions in proton computed tomography and comparison to measurements. <i>Physics in Medicine and Biology</i> , 2019, 64, 145016.	3.0	21
8	Accuracy of low-dose proton <sc>CT</sc> image registration for pretreatment alignment verification in reference to planning proton <sc>CT</sc>. <i>Journal of Applied Clinical Medical Physics</i> , 2019, 20, 83-90.	1.9	9
9	Robust iterative methods: Convergence and applications to proton computed tomography. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	1
10	The impact of secondary fragments on the image quality of helium ion imaging. <i>Physics in Medicine and Biology</i> , 2018, 63, 195016.	3.0	25
11	Software platform for simulation of a prototype proton <sc>CT</sc> scanner. <i>Medical Physics</i> , 2017, 44, 1002-1016.	3.0	48
12	The effect of beam purity and scanner complexity on proton CT accuracy. <i>Medical Physics</i> , 2017, 44, 284-298.	3.0	25
13	Application of fluence field modulation to proton computed tomography for proton therapy imaging. <i>Physics in Medicine and Biology</i> , 2017, 62, 6026-6043.	3.0	18
14	Abstract ID: 138 Fluence modulated proton computed tomography. <i>Physica Medica</i> , 2017, 42, 29-30.	0.7	0
15	Stopping power accuracy and achievable spatial resolution of helium ion imaging using a prototype particle CT detector system. <i>Current Directions in Biomedical Engineering</i> , 2017, 3, 401-404.	0.4	23
16	Results from a Prototype Proton-CT Head Scanner. <i>Physics Procedia</i> , 2017, 90, 209-214.	1.2	21
17	A Highly Accelerated Parallel Multi-GPU based Reconstruction Algorithm for Generating Accurate Relative Stopping Powers. , 2017, , .		1
18	Development of a single ion detector for radiation track structure studies. <i>Journal of Instrumentation</i> , 2016, 11, C09021-C09021.	1.2	19

#	ARTICLE	IF	CITATIONS
19	An evaluation of spatial resolution of a prototype proton CT scanner. Medical Physics, 2016, 43, 6291-6300.	3.0	34
20	A scintillator-based approach to monitor secondary neutron production during proton therapy. Medical Physics, 2016, 43, 5915-5924.	3.0	13
21	Novel scintillation detector design and performance for proton radiography and computed tomography. Medical Physics, 2016, 43, 664-674.	3.0	63
22	Dosimetric evaluation of proton CT using a prototype proton CT scanner. , 2016, , .		3
23	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
24	Development of proton computed tomography detectors for applications in hadron therapy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 809, 120-129.	1.6	47
25	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
26	Measurement of neutrons and photons produced during proton therapy. , 2015, , .		2
27	Particle tracking for hadron therapy with plasma panel sensors: A Monte Carlo simulation study. , 2015, , .		0
28	Incorporating robustness in diagonally-relaxed orthogonal projections method for proton computed tomography. , 2015, , .		3
29	Characterisation of a track structure imaging detector. Radiation Protection Dosimetry, 2015, 166, 223-227.	0.8	12
30	200 MeV Proton Radiography Studies With a Hand Phantom Using a Prototype Proton CT Scanner. IEEE Transactions on Medical Imaging, 2014, 33, 875-881.	8.9	37
31	A novel approach to study radiation track structure with nanometer-equivalent resolution. European Physical Journal D, 2014, 68, 1.	1.3	18
32	Spatial resolution studies for a prototype proton CT scanner. , 2014, , .		0
33	Track reconstruction with the silicon strip tracker of the proton CT Phase 2 scanner. , 2014, , .		2
34	Results from a pre-clinical head scanner for proton CT. , 2014, , .		3
35	Characterization of secondary neutron production during proton therapy. , 2014, , .		2
36	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

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37	Design and construction of the 1st proton CT scanner. AIP Conference Proceedings, 2013, , .	0.4	7
38	Space carving and filtered back-projection as preconditioners for proton computed tomography reconstruction. , 2012, , .		5
39	Water-equivalent path length calibration of a prototype proton CT scanner. Medical Physics, 2012, 39, 2438-2446.	3.0	55
40	Development of a range counter with SiPM readout for proton CT. , 2012, , .		4
41	Monte Carlo simulations for the development a clinical proton CT scanner. , 2012, , .		1
42	200 MeV proton radiography studies with a hand phantom using a prototype proton CT scanner. , 2012, , .		3
43	Detector development for Proton Computed Tomography (pCT). , 2011, , .		10
44	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
45	SU-E-T-350: Calibration of a Prototype Proton CT Scanner. Medical Physics, 2011, 38, 3568-3568.	3.0	0
46	Beam test results of a CsI calorimeter matrix element. Journal of Instrumentation, 2010, 5, P06001-P06001.	1.2	5
47	Proton radiography for clinical applications. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 612, 571-575.	1.6	52
48	A nanodosimetric model of radiation-induced clustered DNA damage yields. Physics in Medicine and Biology, 2010, 55, 761-781.	3.0	58
49	The Effect of Tissue Inhomogeneities on the Accuracy of Proton Path Reconstruction for Proton Computed Tomography. , 2009, , .		5
50	Characteristics of proton CT images reconstructed with filtered backprojection and iterative projection algorithms. , 2009, , .		2
51	A novel detector for 2D ion detection in low-pressure gas and its applications. , 2009, , .		13
52	Experimental Validation of Track Structure Models. IEEE Transactions on Nuclear Science, 2009, 56, 2859-2863.	2.0	8
53	Development of Proton Computed Tomography for Applications in Proton Therapy. , 2009, , .		11
54	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

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55	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
56	Nanodosimetry-based quality factors for radiation protection in space. Zeitschrift Fur Medizinische Physik, 2008, 18, 286-296.	1.5	28
57	Experimental verification of track structure models. , 2008, , .		0
58	Proton computed tomography: Update on current status. , 2007, , .		6
59	Energy Measurements in a Prototype Proton CT Scanner. AIP Conference Proceedings, 2007, , .	0.4	0
60	Residual energy measurements for proton computed tomography. , 2007, , .		0
61	Monte Carlo Studies of a Proton Computed Tomography System. IEEE Transactions on Nuclear Science, 2007, 54, 1487-1491.	2.0	19
62	Prototype Tracking Studies for Proton CT. IEEE Transactions on Nuclear Science, 2007, 54, 140-145.	2.0	29
63	Mapping the sensitive volume of an ion-counting nanodosimeter. Journal of Instrumentation, 2006, 1, P04004-P04004.	1.2	9
64	Silicon Microdosimetry in Heterogeneous Materials: Simulation and Experiment. IEEE Transactions on Nuclear Science, 2006, 53, 3738-3744.	2.0	5
65	Proton Radiography Studies for Proton CT. , 2006, , .		4
66	Nanodosimetric cluster size distributions of therapeutic proton beams. IEEE Transactions on Nuclear Science, 2006, 53, 532-538.	2.0	7
67	Ion-counting nanodosimeter with particle tracking capabilities. Radiation Protection Dosimetry, 2006, 122, 415-419.	0.8	17
68	First attempts at prediction of DNA strand-break yields using nanodosimetric data. Radiation Protection Dosimetry, 2006, 122, 451-454.	0.8	22
69	Density resolution of proton computed tomography. Medical Physics, 2005, 32, 1035-1046.	3.0	135
70	Evaluation of lesion clustering in irradiated plasmid DNA. International Journal of Radiation Biology, 2005, 81, 41-54.	1.8	79
71	The particle tracking silicon microscope PTSM. IEEE Transactions on Nuclear Science, 2004, 51, 2032-2036.	2.0	7
72	Toward Proton Computed Tomography. IEEE Transactions on Nuclear Science, 2004, 51, 3-9.	2.0	44

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73	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
74	Computed tomography with a low-intensity proton flux: results of a Monte Carlo simulation study. , 2004, , .		0
75	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
76	Issues in Proton Computed Tomography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 511, 275-281.	1.6	37
77	Search for lepton-flavor violation in $e^+p$ collisions at DESY HERA. Physical Review D, 2002, 65, .	4.7	6
78	Properties of hadronic final states in diffractive deep inelastic scattering at DESY HERA. Physical Review D, 2002, 65, .	4.7	7
79	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
80	Wall-less Ion-counting Nanodosimetry Applied to Protons. Radiation Protection Dosimetry, 2002, 99, 325-330.	0.8	24
81	A silicon telescope for applications in nanodosimetry. IEEE Transactions on Nuclear Science, 2002, 49, 1724-1727.	2.0	19
82	Exclusive photoproduction of $J/\psi$ mesons at HERA. European Physical Journal C, 2002, 24, 345-360.	3.9	270
83	Dijet production in neutral current deep inelastic scattering at HERA. European Physical Journal C, 2002, 23, 13-27.	3.9	32
84	Dijet photoproduction at HERA and the structure of the photon. European Physical Journal C, 2002, 23, 615-631.	3.9	55
85	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
86	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
87	Measurement of diffractive production of $D_s^{\pm}$ 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
88	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
89	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
90	Measurement of dijet production in neutral current deep inelastic scattering at high $Q^2$ and determination of $\hat{\sigma}_s$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 507, 70-88.	4.1	33

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91	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
92	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
93	Measurement of azimuthal asymmetries in deep inelastic scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 481, 199-212.	4.1	42
94	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
95	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
96	Measurement of exclusive $\bar{\nu}_\mu$ electroproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 487, 273-288.	4.1	51
97	$W$ 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
98	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
99	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
100	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
101	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
102	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
103	Measurement of elastic $\bar{\nu}_\mu$ photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 437, 432-444.	4.1	94
104	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
105	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
106	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
107	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
108	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

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109	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
110	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
111	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
112	Rapidity gaps between jets in photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 369, 55-68.	4.1	56
113	Measurement of elastic $\pi^0$ photoproduction at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 377, 259-272.	4.1	80
114	Measurement of the reaction in deep inelastic $e+p$ scattering at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 380, 220-234.	4.1	38
115	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
116	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
117	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
118	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
119	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
120	Study of $D_s^{\pm}$ production in $ep$ collisions at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 349, 225-237.	4.1	39
121	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
122	Measurement of the cross section for the reaction $\hat{\sigma}(p \rightarrow J/\psi + p)$ with the ZEUS detector at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 350, 120-134.	4.1	78
123	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
124	Diffraction hard photoproduction at HERA and evidence for the gluon content of the pomeron. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 356, 129-146.	4.1	56
125	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
126	Measurement of $\hat{\sigma}_s$ 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



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127	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
128	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
129	Measurement of Charged and Neutral Current $\nu$ -p Deep Inelastic Scattering Cross Sections at High $Q^2$ . Physical Review Letters, 1995, 75, 1006-1011.	7.8	33
130	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
131	Observation of jet production in deep inelastic scattering with a large rapidity gap at HERA. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 332, 228-243.	4.1	63
132	Detailed Monte Carlo Investigation of a Proton Computed Tomography System. , 0, , .		1
133	Prototype Tracking Studies for Proton CT. , 0, , .		1