

# Miroslav Palatka

## List of Publications by Year in descending order

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115  
papers

12,379  
citations

44069

48  
h-index

25787

108  
g-index

118  
all docs

118  
docs citations

118  
times ranked

10119  
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-messenger Observations of a Binary Neutron Star Merger <sup>*</sup> . Astrophysical Journal Letters, 2017, 848, L12.	8.3	2,805
2	Properties and performance of the prototype instrument for the Pierre Auger Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 523, 50-95.	1.6	647
3	Correlation of the Highest-Energy Cosmic Rays with Nearby Extragalactic Objects. Science, 2007, 318, 938-943.	12.6	647
4	Introducing the CTA concept. Astroparticle Physics, 2013, 43, 3-18.	4.3	504
5	Observation of the Suppression of the Flux of Cosmic Rays above $4 \times 10^{19}$ eV. Physical Review Letters, 2008, 101, 061101.	7.8	500
6	The Pierre Auger Cosmic Ray Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 798, 172-213.	1.6	442
7	Measurement of the Depth of Maximum of Extensive Air Showers above $10^{18}$ eV. Physical Review Letters, 2010, 104, 091101.	7.8	429
8	Measurement of the energy spectrum of cosmic rays above 1018 eV using the Pierre Auger Observatory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 685, 239-246.	4.1	357
9	Correlation of the highest-energy cosmic rays with the positions of nearby active galactic nuclei. Astroparticle Physics, 2008, 29, 188-204.	4.3	305
10	The fluorescence detector of the Pierre Auger Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 620, 227-251.	1.6	275
11	Update on the correlation of the highest energy cosmic rays with nearby extragalactic matter. Astroparticle Physics, 2010, 34, 314-326.	4.3	270
12	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. I. Measurements at energies above $1 \times 10^0$ eV. Physical Review D, 2014, 90, .	4.7	266
13	Observation of a large-scale anisotropy in the arrival directions of cosmic rays above $8 \times 10^{18}$ eV. Science, 2017, 357, 1266-1270.	12.6	261
14	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. II. Composition implications. Physical Review D, 2014, 90, .	4.7	213
15	Measurement of the Proton-Air Cross Section at $\sqrt{s} = 57$ TeV at the Pierre Auger Observatory. Physical Review Letters, 2012, 109, 062002.	7.8	212
16	Combined fit of spectrum and composition data as measured by the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 038-038.	5.4	191
17	Upper limit on the cosmic-ray photon flux above 1019eV using the surface detector of the Pierre Auger Observatory. Astroparticle Physics, 2008, 29, 243-256.	4.3	161
18	Testing Hadronic Interactions at Ultrahigh Energies with Air Showers Measured by the Pierre Auger Observatory. Physical Review Letters, 2016, 117, 192001.	7.8	154

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19	Muons in air showers at the Pierre Auger Observatory: Mean number in highly inclined events. <i>Physical Review D</i> , 2015, 91, .	4.7	152
20	Trigger and aperture of the surface detector array of the Pierre Auger Observatory. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 613, 29-39.	1.6	151
21	SEARCHES FOR ANISOTROPIES IN THE ARRIVAL DIRECTIONS OF THE HIGHEST ENERGY COSMIC RAYS DETECTED BY THE PIERRE AUGER OBSERVATORY. <i>Astrophysical Journal</i> , 2015, 804, 15.	4.5	146
22	Upper Limit on the Diffuse Flux of Ultrahigh Energy Tau Neutrinos from the Pierre Auger Observatory. <i>Physical Review Letters</i> , 2008, 100, 211101.	7.8	141
23	Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory. <i>Astrophysical Journal Letters</i> , 2017, 850, L35.	8.3	135
24	Improved limit to the diffuse flux of ultrahigh energy neutrinos from the Pierre Auger Observatory. <i>Physical Review D</i> , 2015, 91, .	4.7	125
25	Upper limit on the cosmic-ray photon fraction at EeV energies from the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2009, 31, 399-406.	4.3	117
26	Limit on the diffuse flux of ultrahigh energy tau neutrinos with the surface detector of the Pierre Auger Observatory. <i>Physical Review D</i> , 2009, 79, .	4.7	99
27	Antennas for the detection of radio emission pulses from cosmic-ray induced air showers at the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2012, 7, P10011-P10011.	1.2	95
28	Measurement of the pressure dependence of air fluorescence emission induced by electrons. <i>Astroparticle Physics</i> , 2007, 28, 41-57.	4.3	91
29	Measurement of the Radiation Energy in the Radio Signal of Extensive Air Showers as a Universal Estimator of Cosmic-Ray Energy. <i>Physical Review Letters</i> , 2016, 116, 241101.	7.8	91
30	An upper limit to the photon fraction in cosmic rays above 10 <sup>19</sup> eV from the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2007, 27, 155-168.	4.3	90
31	Probing the radio emission from air showers with polarization measurements. <i>Physical Review D</i> , 2014, 89, .	4.7	85
32	A study of the effect of molecular and aerosol conditions in the atmosphere on air fluorescence measurements at the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2010, 33, 108-129.	4.3	84
33	Evidence for a mixed mass composition at the "ankle" in the cosmic-ray spectrum. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2016, 762, 288-295.	4.1	84
34	Inferences on mass composition and tests of hadronic interactions from 0.3 to 100 EeV using the water-Cherenkov detectors of the Pierre Auger Observatory. <i>Physical Review D</i> , 2017, 96, .	4.7	82
35	Energy estimation of cosmic rays with the Engineering Radio Array of the Pierre Auger Observatory. <i>Physical Review D</i> , 2016, 93, .	4.7	80
36	Search for first harmonic modulation in the right ascension distribution of cosmic rays detected at the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2011, 34, 627-639.	4.3	73

#	ARTICLE	IF	CITATIONS
37	SEARCHES FOR LARGE-SCALE ANISOTROPY IN THE ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE ENERGY OF $10^{19}$ eV AT THE PIERRE AUGER OBSERVATORY AND THE TELESCOPE ARRAY. <i>Astrophysical Journal</i> , 2014, 794, 172.	4.5	72
38	Muons in air showers at the Pierre Auger Observatory: Measurement of atmospheric production depth. <i>Physical Review D</i> , 2014, 90, .	4.7	69
39	CONSTRAINTS ON THE ORIGIN OF COSMIC RAYS ABOVE $10^{18}$ eV FROM LARGE-SCALE ANISOTROPY SEARCHES IN DATA OF THE PIERRE AUGER OBSERVATORY. <i>Astrophysical Journal Letters</i> , 2013, 762, L13.	8.3	67
40	Description of atmospheric conditions at the Pierre Auger Observatory using the Global Data Assimilation System (GDAS). <i>Astroparticle Physics</i> , 2012, 35, 591-607.	4.3	66
41	The CAT imaging telescope for very-high-energy gamma-ray astronomy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1998, 416, 278-292.	1.6	63
42	SEARCH FOR POINT-LIKE SOURCES OF ULTRA-HIGH ENERGY NEUTRINOS AT THE PIERRE AUGER OBSERVATORY AND IMPROVED LIMIT ON THE DIFFUSE FLUX OF TAU NEUTRINOS. <i>Astrophysical Journal Letters</i> , 2012, 755, L4.	8.3	55
43	The exposure of the hybrid detector of the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2011, 34, 368-381.	4.3	54
44	Advanced functionality for radio analysis in the Offline software framework of the Pierre Auger Observatory. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 635, 92-102.	1.6	52
45	Anisotropy studies around the galactic centre at EeV energies with the Auger Observatory. <i>Astroparticle Physics</i> , 2007, 27, 244-253.	4.3	51
46	Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory. <i>Physical Review D</i> , 2011, 84, .	4.7	51
47	Reconstruction of inclined air showers detected with the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2014, 2014, 019-019.	5.4	49
48	LARGE SCALE DISTRIBUTION OF ULTRA HIGH ENERGY COSMIC RAYS DETECTED AT THE PIERRE AUGER OBSERVATORY WITH ZENITH ANGLES UP TO $80^\circ$ . <i>Astrophysical Journal</i> , 2015, 802, 111.	4.5	49
49	Search for photons with energies above $10^{18}$ eV using the hybrid detector of the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 009-009.	5.4	49
50	LARGE-SCALE DISTRIBUTION OF ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE $10^{18}$ eV AT THE PIERRE AUGER OBSERVATORY. <i>Astrophysical Journal, Supplement Series</i> , 2012, 203, 34.	7.7	44
51	Atmospheric effects on extensive air showers observed with the surface detector of the Pierre Auger observatory. <i>Astroparticle Physics</i> , 2009, 32, 89-99.	4.3	43
52	Ultrahigh Energy Neutrinos at the Pierre Auger Observatory. <i>Advances in High Energy Physics</i> , 2013, 2013, 1-18.	1.1	39
53	Ultrahigh-energy neutrino follow-up of gravitational wave events GW150914 and GW151226 with the Pierre Auger Observatory. <i>Physical Review D</i> , 2016, 94, .	4.7	38
54	Prototype muon detectors for the AMIGA component of the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2016, 11, P02012-P02012.	1.2	38

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55	Precise measurement of the absolute fluorescence yield of the 337nm band in atmospheric gases. <i>Astroparticle Physics</i> , 2013, 42, 90-102.	4.3	37
56	Measurement of the cosmic ray energy spectrum using hybrid events of the Pierre Auger Observatory. <i>European Physical Journal Plus</i> , 2012, 127, 1.	2.6	34
57	Bounds on the density of sources of ultra-high energy cosmic rays from the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2013, 2013, 009-009.	5.4	34
58	Search for signatures of magnetically-induced alignment in the arrival directions measured by the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2012, 35, 354-361.	4.3	32
59	Search for correlations between the arrival directions of IceCube neutrino events and ultrahigh-energy cosmic rays detected by the Pierre Auger Observatory and the Telescope Array. <i>Journal of Cosmology and Astroparticle Physics</i> , 2016, 2016, 037-037.	5.4	31
60	Temperature and humidity dependence of air fluorescence yield measured by AIRFLY. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 597, 50-54.	1.6	30
61	A SEARCH FOR POINT SOURCES OF EeV PHOTONS. <i>Astrophysical Journal</i> , 2014, 789, 160.	4.5	29
62	The bright optical flash from GRB 060117. <i>Astronomy and Astrophysics</i> , 2006, 454, L119-L122.	5.1	27
63	A SEARCH FOR POINT SOURCES OF EeV NEUTRONS. <i>Astrophysical Journal</i> , 2012, 760, 148.	4.5	27
64	Interpretation of the depths of maximum of extensive air showers measured by the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2013, 2013, 026-026.	5.4	27
65	Detection of ultra-high energy cosmic ray showers with a single-pixel fluorescence telescope. <i>Astroparticle Physics</i> , 2016, 74, 64-72.	4.3	26
66	CELESTE: an atmospheric Cherenkov telescope for high energy gamma astrophysics. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2002, 490, 71-89.	1.6	25
67	The effect of the geomagnetic field on cosmic ray energy estimates and large scale anisotropy searches on data from the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 022-022.	5.4	24
68	The rapid atmospheric monitoring system of the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2012, 7, P09001-P09001.	1.2	24
69	Techniques for measuring aerosol attenuation using the Central Laser Facility at the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2013, 8, P04009-P04009.	1.2	24
70	Spectrally resolved pressure dependence measurements of air fluorescence emission with AIRFLY. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 597, 41-45.	1.6	23
71	Azimuthal asymmetry in the risetime of the surface detector signals of the Pierre Auger Observatory. <i>Physical Review D</i> , 2016, 93, .	4.7	21
72	A Targeted Search for Point Sources of EeV Photons with the Pierre Auger Observatory. <i>Astrophysical Journal Letters</i> , 2017, 837, L25.	8.3	21

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73	Calibration of the logarithmic-periodic dipole antenna (LPDA) radio stations at the Pierre Auger Observatory using an octocopter. <i>Journal of Instrumentation</i> , 2017, 12, T10005-T10005.	1.2	21
74	Measurement of the cosmic ray spectrum above $4 \times 10^{18}$ eV using inclined events detected with the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 049-049.	5.4	20
75	Nanosecond-level time synchronization of autonomous radio detector stations for extensive air showers. <i>Journal of Instrumentation</i> , 2016, 11, P01018-P01018.	1.2	20
76	A novel method for the absolute fluorescence yield measurement by AIRFLY. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 597, 55-60.	1.6	18
77	Energy dependence of air fluorescence yield measured by AIRFLY. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 597, 46-49.	1.6	18
78	Outline of the ELI-Beamlines facility. <i>Proceedings of SPIE</i> , 2011, , .	0.8	17
79	The Pierre Auger Observatory scaler mode for the study of solar activity modulation of galactic cosmic rays. <i>Journal of Instrumentation</i> , 2011, 6, P01003-P01003.	1.2	16
80	The Lateral Trigger Probability function for the Ultra-High Energy Cosmic Ray showers detected by the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2011, 35, 266-276.	4.3	16
81	Muon counting using silicon photomultipliers in the AMIGA detector of the Pierre Auger observatory. <i>Journal of Instrumentation</i> , 2017, 12, P03002-P03002.	1.2	16
82	Search for ultrarelativistic magnetic monopoles with the Pierre Auger observatory. <i>Physical Review D</i> , 2016, 94, .	4.7	15
83	Prototype tests for the CELESTE solar array gamma-ray telescope. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1998, 412, 329-341.	1.6	14
84	A TARGETED SEARCH FOR POINT SOURCES OF EeV NEUTRONS. <i>Astrophysical Journal Letters</i> , 2014, 789, L34.	8.3	14
85	Prospects for Cherenkov Telescope Array Observations of the Young Supernova Remnant RX J1713.7-3946. <i>Astrophysical Journal</i> , 2017, 840, 74.	4.5	14
86	Multi-resolution anisotropy studies of ultrahigh-energy cosmic rays detected at the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 026-026.	5.4	14
87	Search for patterns by combining cosmic-ray energy and arrival directions at the Pierre Auger Observatory. <i>European Physical Journal C</i> , 2015, 75, 269.	3.9	12
88	Anisotropy and chemical composition of ultra-high energy cosmic rays using arrival directions measured by the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 022-022.	5.4	9
89	The prototype opto-mechanical system for the Fluorescence detector Array of Single-pixel Telescopes. <i>Journal of Instrumentation</i> , 2017, 12, T07001-T07001.	1.2	9
90	Publisher's Note: Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory [ <i>Phys. Rev. D</i> 84, 122005 (2011)]. <i>Physical Review D</i> , 2012, 85, .	4.7	8

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91	Identifying clouds over the Pierre Auger Observatory using infrared satellite data. <i>Astroparticle Physics</i> , 2013, 50-52, 92-101.	4.3	8
92	Status of the technologies for the production of the Cherenkov Telescope Array (CTA) mirrors. , 2013, , .		8
93	Impact of atmospheric effects on the energy reconstruction of air showers observed by the surface detectors of the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2017, 12, P02006-P02006.	1.2	8
94	The Cherenkov Telescope Array potential for the study of young supernova remnants. <i>Astroparticle Physics</i> , 2015, 62, 152-164.	4.3	7
95	Spectral calibration of the fluorescence telescopes of the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2017, 95, 44-56.	4.3	7
96	AIRFLY: Measurement of the Air Fluorescence Radiation Induced by Electrons. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2006, 150, 186-189.	0.4	6
97	AIRFLY: Measurement of the uorescence yield in atmospheric gases. <i>European Physical Journal D</i> , 2006, 56, A361-A367.	0.4	6
98	A search for anisotropy in the arrival directions of ultra high energy cosmic rays recorded at the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2012, 2012, 040-040.	5.4	6
99	Origin of atmospheric aerosols at the Pierre Auger Observatory using studies of air mass trajectories in South America. <i>Atmospheric Research</i> , 2014, 149, 120-135.	4.1	6
100	All Sky Camera for the CTA Atmospheric Calibration work package. <i>EPJ Web of Conferences</i> , 2015, 89, 03007.	0.3	6
101	BRDF profile of Tyvek and its implementation in the Geant4 simulation toolkit. <i>Optics Express</i> , 2011, 19, 4199.	3.4	5
102	Precise measurement of the absolute yield of fluorescence photons in atmospheric gases. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2011, 212-213, 356-361.	0.4	5
103	Use of a general purpose integrating sphere as a low intensity near-UV extended uniform light source. <i>Optik</i> , 2021, 242, 167169.	2.9	3
104	Shape parameters measurement of ultralight mirrors. <i>Optik</i> , 2010, 121, 1881-1884.	2.9	2
105	Mirror segments for large mirror systems of weak optical signals detectors for UV spectral range. <i>Proceedings of SPIE</i> , 2011, , .	0.8	1
106	The FAST Project - A Next Generation UHECR Observatory. <i>EPJ Web of Conferences</i> , 2017, 136, 02015.	0.3	1
107	<title>Optical filters designed for the fluorescence detector of the AUGER project with transmittance in the range of 300 nm to 420 nm</title>. , 2001, , .		0
108	The optical layout of the fluorescence detector of the Pierre Auger Observatory. , 2003, , .		0

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109	Thin glass mirrors for the Pierre Auger project. , 2003, , .		0
110	<title>Chamber with controlled atmosphere for fluorescence measurements in the project AIRFLY</title>. , 2007, , .		0
111	Temperature chamber for measurement of fluorescence yield and nitrogen spectrum in the project AIRFLY. Optik, 2009, 120, 619-622.	2.9	0
112	Precise Measurement of the Absolute Fluorescence Yield. , 2011, , .		0
113	Surface microstructure of water Cherenkov detectors reflective liner: Tyvek. Proceedings of SPIE, 2012, , .	0.8	0
114	Application of optical elements for temporal and spatial transformation of ultra-short and ultra-intense light pulses. Proceedings of SPIE, 2012, , .	0.8	0
115	Using Geant4 toolkit for simulations of optical systems with rough isotropic surfaces using BRDF profiles. Proceedings of SPIE, 2012, , .	0.8	0