

Jakub Vicha

List of Publications by Year in descending order

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Version: 2024-02-01

70
papers

7,290
citations

109321

35
h-index

88630

70
g-index

73
all docs

73
docs citations

73
times ranked

9388
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-messenger Observations of a Binary Neutron Star Merger [*] . Astrophysical Journal Letters, 2017, 848, L12.	8.3	2,805
2	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
3	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. I. Measurements at energies above $\sqrt{s} > 10$ TeV. Physical Review D, 2014, 90, .	4.7	266
4	Observation of a large-scale anisotropy in the arrival directions of cosmic rays above 8 Å– 10 ¹⁸ eV. Science, 2017, 357, 1266-1270.	12.6	261
5	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. II. Composition implications. Physical Review D, 2014, 90, .	4.7	213
6	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
7	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
8	An Indication of Anisotropy in Arrival Directions of Ultra-high-energy Cosmic Rays through Comparison to the Flux Pattern of Extragalactic Gamma-Ray Sources [*] . Astrophysical Journal Letters, 2018, 853, L29.	8.3	165
9	Testing Hadronic Interactions at Ultrahigh Energies with Air Showers Measured by the Pierre Auger Observatory. Physical Review Letters, 2016, 117, 192001.	7.8	154
10	Muons in air showers at the Pierre Auger Observatory: Mean number in highly inclined events. Physical Review D, 2015, 91, .	4.7	152
11	SEARCHES FOR ANISOTROPIES IN THE ARRIVAL DIRECTIONS OF THE HIGHEST ENERGY COSMIC RAYS DETECTED BY THE PIERRE AUGER OBSERVATORY. Astrophysical Journal, 2015, 804, 15.	4.5	146
12	Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory. Astrophysical Journal Letters, 2017, 850, L35.	8.3	135
13	Improved limit to the diffuse flux of ultrahigh energy neutrinos from the Pierre Auger Observatory. Physical Review D, 2015, 91, .	4.7	125
14	Antennas for the detection of radio emission pulses from cosmic-ray induced air showers at the Pierre Auger Observatory. Journal of Instrumentation, 2012, 7, P10011-P10011.	1.2	95
15	Measurement of the Radiation Energy in the Radio Signal of Extensive Air Showers as a Universal Estimator of Cosmic-Ray Energy. Physical Review Letters, 2016, 116, 241101.	7.8	91
16	Probing the radio emission from air showers with polarization measurements. Physical Review D, 2014, 89, .	4.7	85
17	Evidence for a mixed mass composition at the ankle TM in the cosmic-ray spectrum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 762, 288-295.	4.1	84
18	Inferences on mass composition and tests of hadronic interactions from 0.3 to 100 ÅEeV using the water-Cherenkov detectors of the Pierre Auger Observatory. Physical Review D, 2017, 96, .	4.7	82

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19	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
20	Large-scale Cosmic-Ray Anisotropies above 4 EeV Measured by the Pierre Auger Observatory. <i>Astrophysical Journal</i> , 2018, 868, 4.	4.5	77
21	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
22	Muons in air showers at the Pierre Auger Observatory: Measurement of atmospheric production depth. <i>Physical Review D</i> , 2014, 90, .	4.7	69
23	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
24	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
25	Probing the origin of ultra-high-energy cosmic rays with neutrinos in the EeV energy range using the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 022-022.	5.4	64
26	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
27	Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory. <i>Physical Review D</i> , 2011, 84, .	4.7	51
28	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
29	LARGE SCALE DISTRIBUTION OF ULTRA HIGH ENERGY COSMIC RAYS DETECTED AT THE PIERRE AUGER OBSERVATORY WITH ZENITH ANGLES UP TO 80° . <i>Astrophysical Journal</i> , 2015, 802, 111.	4.5	49
30	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
31	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
32	Ultrahigh Energy Neutrinos at the Pierre Auger Observatory. <i>Advances in High Energy Physics</i> , 2013, 2013, 1-18.	1.1	39
33	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
34	Prototype muon detectors for the AMIGA component of the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2016, 11, P02012-P02012.	1.2	38
35	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
36	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

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37	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
38	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
39	Observation of inclined EeV air showers with the radio detector of the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2018, 2018, 026-026.	5.4	30
40	A SEARCH FOR POINT SOURCES OF EeV PHOTONS. <i>Astrophysical Journal</i> , 2014, 789, 160.	4.5	29
41	A SEARCH FOR POINT SOURCES OF EeV NEUTRONS. <i>Astrophysical Journal</i> , 2012, 760, 148.	4.5	27
42	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
43	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
44	The rapid atmospheric monitoring system of the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2012, 7, P09001-P09001.	1.2	24
45	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
46	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
47	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
48	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
49	Measurement of the cosmic ray spectrum above 4×10^{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
50	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
51	Data-driven estimation of the invisible energy of cosmic ray showers with the Pierre Auger Observatory. <i>Physical Review D</i> , 2019, 100, .	4.7	20
52	Multi-Messenger Physics With the Pierre Auger Observatory. <i>Frontiers in Astronomy and Space Sciences</i> , 2019, 6, .	2.8	20
53	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
54	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

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55	Search for ultrarelativistic magnetic monopoles with the Pierre Auger observatory. <i>Physical Review D</i> , 2016, 94, .	4.7	15
56	A TARGETED SEARCH FOR POINT SOURCES OF EeV NEUTRONS. <i>Astrophysical Journal Letters</i> , 2014, 789, L34.	8.3	14
57	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
58	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
59	Measurement of the average shape of longitudinal profiles of cosmic-ray air showers at the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 018-018.	5.4	10
60	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
61	MARTA: a high-energy cosmic-ray detector concept for high-accuracy muon measurement. <i>European Physical Journal C</i> , 2018, 78, 1.	3.9	9
62	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
63	Identifying clouds over the Pierre Auger Observatory using infrared satellite data. <i>Astroparticle Physics</i> , 2013, 50-52, 92-101.	4.3	8
64	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
65	Spectral calibration of the fluorescence telescopes of the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2017, 95, 44-56.	4.3	7
66	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
67	Maximum entropy analysis of cosmic ray composition. <i>Astroparticle Physics</i> , 2016, 76, 9-18.	4.3	1
68	Data Processing at the Pierre Auger Observatory. <i>Journal of Physics: Conference Series</i> , 2015, 608, 012077.	0.4	0
69	Study of dispersion of mass distribution of ultra-high energy cosmic rays using a surface array of muon and electromagnetic detectors. <i>Astroparticle Physics</i> , 2015, 69, 11-17.	4.3	0
70	Probing the universe at the highest energies with the Pierre Auger Observatory. <i>Astronomische Nachrichten</i> , 2019, 340, 57-61.	1.2	0