

Jakub Vicha

List of Publications by Year in descending order

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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	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
2	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
3	Multi-Messenger Physics With the Pierre Auger Observatory. <i>Frontiers in Astronomy and Space Sciences</i> , 2019, 6, .	2.8	20
4	Probing the universe at the highest energies with the Pierre Auger Observatory. <i>Astronomische Nachrichten</i> , 2019, 340, 57-61.	1.2	0
5	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
6	An Indication of Anisotropy in Arrival Directions of Ultra-high-energy Cosmic Rays through Comparison to the Flux Pattern of Extragalactic Gamma-Ray Sources [*] . <i>Astrophysical Journal Letters</i> , 2018, 853, L29.	8.3	165
7	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
8	Large-scale Cosmic-Ray Anisotropies above 4 EeV Measured by the Pierre Auger Observatory. <i>Astrophysical Journal</i> , 2018, 868, 4.	4.5	77
9	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
10	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
11	Combined fit of spectrum and composition data as measured by the Pierre Auger Observatory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 038-038.	5.4	191
12	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
13	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
14	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
15	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
16	Multi-messenger Observations of a Binary Neutron Star Merger [*] . <i>Astrophysical Journal Letters</i> , 2017, 848, L12.	8.3	2,805
17	Spectral calibration of the fluorescence telescopes of the Pierre Auger Observatory. <i>Astroparticle Physics</i> , 2017, 95, 44-56.	4.3	7
18	Observation of a large-scale anisotropy in the arrival directions of cosmic rays above 8×10^{18} eV. <i>Science</i> , 2017, 357, 1266-1270.	12.6	261

#	ARTICLE	IF	CITATIONS
19	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
20	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
21	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
22	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
23	Maximum entropy analysis of cosmic ray composition. <i>Astroparticle Physics</i> , 2016, 76, 9-18.	4.3	1
24	Evidence for a mixed mass composition at the \sim ankle \hat{a} ™ 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
25	Search for ultrarelativistic magnetic monopoles with the Pierre Auger observatory. <i>Physical Review D</i> , 2016, 94, .	4.7	15
26	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
27	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
28	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
29	Testing Hadronic Interactions at Ultrahigh Energies with Air Showers Measured by the Pierre Auger Observatory. <i>Physical Review Letters</i> , 2016, 117, 192001.	7.8	154
30	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
31	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
32	Prototype muon detectors for the AMIGA component of the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2016, 11, P02012-P02012.	1.2	38
33	The Pierre Auger Cosmic Ray Observatory. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2015, 798, 172-213.	1.6	442
34	Measurement of the cosmic ray spectrum above 4 \hat{A} – 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
35	Data Processing at the Pierre Auger Observatory. <i>Journal of Physics: Conference Series</i> , 2015, 608, 012077.	0.4	0
36	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

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37	Improved limit to the diffuse flux of ultrahigh energy neutrinos from the Pierre Auger Observatory. Physical Review D, 2015, 91, .	4.7	125
38	Muons in air showers at the Pierre Auger Observatory: Mean number in highly inclined events. Physical Review D, 2015, 91, .	4.7	152
39	Study of dispersion of mass distribution of ultra-high energy cosmic rays using a surface array of muon and electromagnetic detectors. Astroparticle Physics, 2015, 69, 11-17.	4.3	0
40	Search for patterns by combining cosmic-ray energy and arrival directions at the Pierre Auger Observatory. European Physical Journal C, 2015, 75, 269.	3.9	12
41	LARGE SCALE DISTRIBUTION OF ULTRA HIGH ENERGY COSMIC RAYS DETECTED AT THE PIERRE AUGER OBSERVATORY WITH ZENITH ANGLES UP TO 80°. Astrophysical Journal, 2015, 802, 111.	4.5	49
42	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. I. Measurements at energies above $1 < \sup > 0 < /sup > \text{eV}$. Physical Review D, 2014, 90, .	4.7	266
43	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. II. Composition implications. Physical Review D, 2014, 90, .	4.7	213
44	SEARCHES FOR LARGE-SCALE ANISOTROPY IN THE ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE ENERGY OF $10 < \sup > 19 < /sup > \text{eV}$ AT THE PIERRE AUGER OBSERVATORY AND THE TELESCOPE ARRAY. Astrophysical Journal, 2014, 794, 172.	4.5	72
45	A SEARCH FOR POINT SOURCES OF EeV PHOTONS. Astrophysical Journal, 2014, 789, 160.	4.5	29
46	Reconstruction of inclined air showers detected with the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 019-019.	5.4	49
47	Probing the radio emission from air showers with polarization measurements. Physical Review D, 2014, 89, .	4.7	85
48	Muons in air showers at the Pierre Auger Observatory: Measurement of atmospheric production depth. Physical Review D, 2014, 90, .	4.7	69
49	A TARGETED SEARCH FOR POINT SOURCES OF EeV NEUTRONS. Astrophysical Journal Letters, 2014, 789, L34.	8.3	14
50	Origin of atmospheric aerosols at the Pierre Auger Observatory using studies of air mass trajectories in South America. Atmospheric Research, 2014, 149, 120-135.	4.1	6
51	Identifying clouds over the Pierre Auger Observatory using infrared satellite data. Astroparticle Physics, 2013, 50-52, 92-101.	4.3	8
52	Ultrahigh Energy Neutrinos at the Pierre Auger Observatory. Advances in High Energy Physics, 2013, 2013, 1-18.	1.1	39
53	Techniques for measuring aerosol attenuation using the Central Laser Facility at the Pierre Auger Observatory. Journal of Instrumentation, 2013, 8, P04009-P04009.	1.2	24
54	Interpretation of the depths of maximum of extensive air showers measured by the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 026-026.	5.4	27

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55	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
56	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
57	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
58	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
59	Measurement of the Proton-Air Cross Section at $\sqrt{s} < 57 \text{ TeV} < \mathcal{O}(100) \text{ TeV}$ at the Pierre Auger Observatory. <i>Physical Review Letters</i> , 2012, 109, 062002.	7.8	212
60	Publisher's Note: Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory [Phys. Rev. D84, 122005 (2011)]. <i>Physical Review D</i> , 2012, 85, .	4.7	8
61	A SEARCH FOR POINT SOURCES OF EeV NEUTRONS. <i>Astrophysical Journal</i> , 2012, 760, 148.	4.5	27
62	LARGE-SCALE DISTRIBUTION OF ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE 10^{18} eV AT THE PIERRE AUGER OBSERVATORY. <i>Astrophysical Journal</i> , Supplement Series, 2012, 203, 34.	7.7	44
63	The rapid atmospheric monitoring system of the Pierre Auger Observatory. <i>Journal of Instrumentation</i> , 2012, 7, P09001-P09001.	1.2	24
64	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
65	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
66	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
67	Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory. <i>Physical Review D</i> , 2011, 84, .	4.7	51
68	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
69	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
70	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