Ingomar Allekotte

List of Publications by Year
in descending order

96 papers	9,455 citations	44069 48 h-index	36028 97 g-index
99 all docs	99 docs citations	99 times ranked	4443 citing authors

#	Article	IF	Citations
1	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
2	Correlation of the Highest-Energy Cosmic Rays with Nearby Extragalactic Objects. Science, 2007, 318, 938-943.	12.6	647
3	Design concepts for the Cherenkov Telescope Array CTA: an advanced facility for ground-based high-energy gamma-ray astronomy. Experimental Astronomy, 2011, 32, 193-316.	3.7	640
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<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>4</mml:mn><mml:mo>Ã—</mml:mo><mml:msup><mml:mn>10</mml:mn><mml:mn>19</mml:mn></mml:msup><mml:mo>eV</mml:mo></mml:math>. Physical Review Letters, 2008, 101, 061101.	7.8	500
6	Measurement of the Depth of Maximum of Extensive Air Showers above<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mn>10</mml:mn><mml:mn>18</mml:mn></mml:msup><mml:mtext>â€‰</mml:mtext><mml:mtext>eV</mml:mtext></mml:math>. Physical Review Letters, 2010, 104, 091101.	7.8	429
7	Correlation of the highest-energy cosmic rays with the positions of nearby active galactic nuclei. Astroparticle Physics, 2008, 29, 188-204.	4.3	305
8	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
9	Update on the correlation of the highest energy cosmic rays with nearby extragalactic matter. Astroparticle Physics, 2010, 34, 314-326.	4.3	270
10	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. I. Measurements at energies above<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:msup><mml:mrow><mml:mn>0</mml:mn></mml:mrow><mml:mrow><mml:mn>1</mml:mn><mml:mn>9</mml:mn></mml:mrow></mml:msup></mml:mrow><mml:mo>eV</mml:mo></mml:math>. Physical Review D, 2014, 90, .	4.7	266
11	Observation of a large-scale anisotropy in the arrival directions of cosmic rays above 8 Ã— 10 ¹⁸ eV. Science, 2017, 357, 1266-1270.	12.6	261
12	Depth of maximum of air-shower profiles at the Pierre Auger Observatory. II. Composition implications. Physical Review D, 2014, 90, .	4.7	213
13	Measurement of the Proton-Air Cross Section at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msqrt><mml:mi>s</mml:mi></mml:msqrt><mml:mo mathvariant="bold">=</mml:mo><mml:mn>57</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:mi>T</mml:mi></mml:math> the Pierre Auger Observatory. Physical Review Letters, 2012, 109, 062002.	7.8	212
14	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
15	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
16	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
17	Testing Hadronic Interactions at Ultrahigh Energies with Air Showers Measured by the Pierre Auger Observatory. Physical Review Letters, 2016, 117, 192001.	7.8	154
18	Muons in air showers at the Pierre Auger Observatory: Mean number in highly inclined events. Physical Review D, 2015, 91, .	4.7	152

#	Article	IF	Citations
19	Trigger and aperture of the surface detector array of the Pierre Auger Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 613, 29-39.	1.6	151
20	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
21	Upper Limit on the Diffuse Flux of Ultrahigh Energy Tau Neutrinos from the Pierre Auger Observatory. Physical Review Letters, 2008, 100, 211101.	7.8	141
22	Improved limit to the diffuse flux of ultrahigh energy neutrinos from the Pierre Auger Observatory. Physical Review D, 2015, 91, .	4.7	125
23	The surface detector system of the Pierre Auger Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 586, 409-420.	1.6	124
24	Upper limit on the cosmic-ray photon fraction at EeV energies from the Pierre Auger Observatory. Astroparticle Physics, 2009, 31, 399-406.	4.3	117
25	Limit on the diffuse flux of ultrahigh energy tau neutrinos with the surface detector of the Pierre Auger Observatory. Physical Review D, 2009, 79, .	4.7	99
26	Measurement of the cosmic-ray energy spectrum above <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>2.5</mml:mn><mml:mo>Ã—</mml:mo><mml:msup><mml:mn>10</mml:mn><mml:mn>18</mml:mn></mml using the Pierre Auger Observatory. Physical Review D, 2020, 102, .	4.7	98
27	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
28	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
29	An upper limit to the photon fraction in cosmic rays above 1019eV from the Pierre Auger Observatory. Astroparticle Physics, 2007, 27, 155-168.	4.3	90
30	Probing the radio emission from air showers with polarization measurements. Physical Review D, 2014, 89, .	4.7	85
31	A study of the effect of molecular and aerosol conditions in the atmosphere on air fluorescence measurements at the Pierre Auger Observatory. Astroparticle Physics, 2010, 33, 108-129.	4.3	84
32	Evidence for a mixed mass composition at the â€˜ankleâ€™ in the cosmic-ray spectrum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 762, 288-295.	4.1	84
33	Inferences on mass composition and tests of hadronic interactions from 0.3 to 100ÂEeV using the water-Cherenkov detectors of the Pierre Auger Observatory. Physical Review D, 2017, 96, .	4.7	82
34	Energy estimation of cosmic rays with the Engineering Radio Array of the Pierre Auger Observatory. Physical Review D, 2016, 93, .	4.7	80
35	Features of the Energy Spectrum of Cosmic Rays above <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>2.5</mml:mn><mml:mo>Ã—</mml:mo><mml:msup><mml:mn>10</mml:mn><mml:mn>18</mml:mn></ Using the Pierre Auger Observatory. Physical Review Letters, 2020, 125, 121106.	7.8	79
36	Large-scale Cosmic-Ray Anisotropies above 4 EeV Measured by the Pierre Auger Observatory. Astrophysical Journal, 2018, 868, 4.	4.5	77

#	Article	IF	Citations
37	Search for first harmonic modulation in the right ascension distribution of cosmic rays detected at the Pierre Auger Observatory. Astroparticle Physics, 2011, 34, 627-639.	4.3	73
38	SEARCHES FOR LARGE-SCALE ANISOTROPY IN THE ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE ENERGY OF 10¹⁹eV AT THE PIERRE AUGER OBSERVATORY AND THE TELESCOPE ARRAY. Astrophysical Journal, 2014, 794, 172.	4.5	72
39	Muons in air showers at the Pierre Auger Observatory: Measurement of atmospheric production depth. Physical Review D, 2014, 90, .	4.7	69
40	CONSTRAINTS ON THE ORIGIN OF COSMIC RAYS ABOVE 10 ¹⁸ eV FROM LARGE-SCALE ANISOTROPY SEARCHES IN DATA OF THE PIERRE AUGER OBSERVATORY. Astrophysical Journal Letters, 2013, 762, L13.	8.3	67
41	Description of atmospheric conditions at the Pierre Auger Observatory using the Global Data Assimilation System (GDAS). Astroparticle Physics, 2012, 35, 591-607.	4.3	66
42	Probing the origin of ultra-high-energy cosmic rays with neutrinos in the EeV energy range using the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 022-022.	5.4	64
43	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. Astrophysical Journal Letters, 2012, 755, L4.	8.3	55
44	The exposure of the hybrid detector of the Pierre Auger Observatory. Astroparticle Physics, 2011, 34, 368-381.	4.3	54
45	Advanced functionality for radio analysis in the Offline software framework of the Pierre Auger Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 635, 92-102.	1.6	52
46	Anisotropy studies around the galactic centre at EeV energies with the Auger Observatory. Astroparticle Physics, 2007, 27, 244-253.	4.3	51
47	Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory. Physical Review D, 2011, 84, .	4.7	51
48	LARGE SCALE DISTRIBUTION OF ULTRA HIGH ENERGY COSMIC RAYS DETECTED AT THE PIERRE AUGER OBSERVATORY WITH ZENITH ANGLES UP TO 80Â°. Astrophysical Journal, 2015, 802, 111.	4.5	49
49	Search for photons with energies above 10¹⁸eV using the hybrid detector of the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 009-009.	5.4	49
50	LARGE-SCALE DISTRIBUTION OF ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE 10¹⁸ eV AT THE PIERRE AUGER OBSERVATORY. Astrophysical Journal, Supplement Series, 2012, 203, 34.	7.7	44
51	Atmospheric effects on extensive air showers observed with the surface detector of the Pierre Auger observatory. Astroparticle Physics, 2009, 32, 89-99.	4.3	43
52	Ultrahigh Energy Neutrinos at the Pierre Auger Observatory. Advances in High Energy Physics, 2013, 2013, 1-18.	1.1	39
53	Cosmic-Ray Anisotropies in Right Ascension Measured by the Pierre Auger Observatory. Astrophysical Journal, 2020, 891, 142.	4.5	39
54	Ultrahigh-energy neutrino follow-up of gravitational wave events GW150914 and GW151226 with the Pierre Auger Observatory. Physical Review D, 2016, 94, .	4.7	38

#	Article	IF	Citations
55	Direct measurement of the muonic content of extensive air showers between $$mathbf { 2imes 10^{17}}$$ and $$mathbf {2imes 10^{18}}~$$eV at the Pierre Auger Observatory. European Physical Journal C, 2020, 80, 1.	3.9	36
56	Measurement of the Fluctuations in the Number of Muons in Extensive Air Showers with the Pierre Auger Observatory. Physical Review Letters, 2021, 126, 152002.	7.8	34
57	Search for signatures of magnetically-induced alignment in the arrival directions measured by the Pierre Auger Observatory. Astroparticle Physics, 2012, 35, 354-361.	4.3	32
58	Underground muon counters as a tool for composition analyses. Astroparticle Physics, 2008, 29, 461-470.	4.3	31
59	Observation of inclined EeV air showers with the radio detector of the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 026-026.	5.4	30
60	A SEARCH FOR POINT SOURCES OF EeV PHOTONS. Astrophysical Journal, 2014, 789, 160.	4.5	29
61	Use of water-Cherenkov detectors to detect Gamma Ray Bursts at the Large Aperture GRB Observatory (LAGO). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 595, 70-72.	1.6	27
62	A SEARCH FOR POINT SOURCES OF EeV NEUTRONS. Astrophysical Journal, 2012, 760, 148.	4.5	27
63	Azimuthal asymmetry in the risetime of the surface detector signals of the Pierre Auger Observatory. Physical Review D, 2016, 93, .	4.7	21
64	A Targeted Search for Point Sources of EeV Photons with the Pierre Auger Observatory. Astrophysical Journal Letters, 2017, 837, L25.	8.3	21
65	Calibration of the logarithmic-periodic dipole antenna (LPDA) radio stations at the Pierre Auger Observatory using an octocopter. Journal of Instrumentation, 2017, 12, T10005-T10005.	1.2	21
66	A Search for Photons with Energies Above 2 Ã— 10¹⁷ eV Using Hybrid Data from the Low-Energy Extensions of the Pierre Auger Observatory. Astrophysical Journal, 2022, 933, 125.	4.5	21
67	Data-driven estimation of the invisible energy of cosmic ray showers with the Pierre Auger Observatory. Physical Review D, 2019, 100, .	4.7	20
68	Reconstruction of events recorded with the surface detector of the Pierre Auger Observatory. Journal of Instrumentation, 2020, 15, P10021-P10021.	1.2	20
69	Limits on point-like sources of ultra-high-energy neutrinos with the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 004-004.	5.4	18
70	The Lateral Trigger Probability function for the Ultra-High Energy Cosmic Ray showers detected by the Pierre Auger Observatory. Astroparticle Physics, 2011, 35, 266-276.	4.3	16
71	Muon counting using silicon photomultipliers in the AMIGA detector of the Pierre Auger observatory. Journal of Instrumentation, 2017, 12, P03002-P03002.	1.2	16
72	Deep-learning based reconstruction of the shower maximum X _{max} using the water-Cherenkov detectors of the Pierre Auger Observatory. Journal of Instrumentation, 2021, 16, P07019.	1.2	16

#	Article	IF	Citations
73	Search for ultrarelativistic magnetic monopoles with the Pierre Auger observatory. Physical Review D, 2016, 94, .	4.7	15
74	A TARGETED SEARCH FOR POINT SOURCES OF EeV NEUTRONS. Astrophysical Journal Letters, 2014, 789, L34.	8.3	14
75	Multi-resolution anisotropy studies of ultrahigh-energy cosmic rays detected at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 026-026.	5.4	14
76	Enhancing the Pierre Auger Observatory to the â€“eV range: Capabilities of an Infill Surface Array. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 566, 302-311.	1.6	13
77	Design, upgrade and characterization of the silicon photomultiplier front-end for the AMIGA detector at the Pierre Auger Observatory. Journal of Instrumentation, 2021, 16, P01026-P01026.	1.2	13
78	A Search for Ultra-high-energy Neutrinos from TXS 0506+056 Using the Pierre Auger Observatory. Astrophysical Journal, 2020, 902, 105.	4.5	13
79	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
80	Measurement of the average shape of longitudinal profiles of cosmic-ray air showers at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 018-018.	5.4	10
81	Search for magnetically-induced signatures in the arrival directions of ultra-high-energy cosmic rays measured at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 017-017.	5.4	10
82	A 3â€Year Sample of Almost 1,600 Elves Recorded Above South America by the Pierre Auger Cosmicâ€Ray Observatory. Earth and Space Science, 2020, 7, e2019EA000582.	2.6	9
83	Publisherâ€™s Note: Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory [Phys. Rev. D84, 122005 (2011)]. Physical Review D, 2012, 85, .	4.7	8
84	Identifying clouds over the Pierre Auger Observatory using infrared satellite data. Astroparticle Physics, 2013, 50-52, 92-101.	4.3	8
85	Impact of atmospheric effects on the energy reconstruction of air showers observed by the surface detectors of the Pierre Auger Observatory. Journal of Instrumentation, 2017, 12, P02006-P02006.	1.2	8
86	Spectral calibration of the fluorescence telescopes of the Pierre Auger Observatory. Astroparticle Physics, 2017, 95, 44-56.	4.3	7
87	A search for anisotropy in the arrival directions of ultra high energy cosmic rays recorded at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 040-040.	5.4	6
88	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
89	Studies on the response of a water-Cherenkov detector of the Pierre Auger Observatory to atmospheric muons using an RPC hodoscope. Journal of Instrumentation, 2020, 15, P09002-P09002.	1.2	5
90	Calibration of the underground muon detector of the Pierre Auger Observatory. Journal of Instrumentation, 2021, 16, P04003.	1.2	5

#	Article	IF	Citations
91	Testing effects of Lorentz invariance violation in the propagation of astroparticles with the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2022, 2022, 023.	5.4	5
92	Site survey for the Pierre Auger observatory. Journal of Physics G: Nuclear and Particle Physics, 2002, 28, 1499-1509.	3.6	2
93	The FRAM robotic telescope for atmospheric monitoring at the Pierre Auger Observatory. Journal of Instrumentation, 2021, 16, P06027.	1.2	2
94	Partition function for the N=2 superstring on the torus. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1990, 251, 254-259.	4.1	1
95	Acceptance and Angular Resolution of an Infill Array for the Pierre Auger Surface Detector. AIP Conference Proceedings, 2007, , .	0.4	0
96	Sites for Gamma-ray Astronomy in Argentina. , 2008, , .		0