MIGUEL Villaplana Perez

List of Articles by Year
in descending order

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88 peer-reviewed articles	2,273 peer-reviewed citations	330024 24 peer-reviewed h-index	358199 4.43 score
90 documents	2398 doc citations	354388 25 h-index	3 citing authors

#	ARTICLE	IF	CITATIONS
1	Search for singly produced vectorlike top quarks in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi><mml:mi>p</mml:mi></mml:math> collisions at <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"	3.4	2
2	Search for Magnetic Monopole Pair Production in Ultraperipheral Pb+Pb Collisions at sNN=5.36 TeV with the ATLAS Detector at the LHC. Physical Review Letters, 2025, 134, .	5.8	13
3	Search for Higgs boson production in the 6b final state using pp collisions at	3.4	13
4	Measurement of photonuclear jet production in ultraperipheral Pb+Pb collisions at sNN=5.02 TeV with the ATLAS detector. Physical Review D, 2025, 111, .	3.4	14
5	Search for Dark Matter Produced in Association with a Dark Higgs Boson in the b	5.8	3
6	Observation of tt¯ Production in Pb+Pb Collisions at sNN=5.02 TeV with the ATLAS Detector. Physical Review Letters, 2025, 134, .	5.8	5
7	Jet-induced diffusion wake in the quark-gluon plasma via measurements of jet-track correlations in photon-jet events in Pb	2.1	9
8	Search for cascade decays of charged sleptons and sneutrinos in final states with three leptons and missing transverse momentum in p	3.4	2
9	Search for displaced leptons in p <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msqrt><mml:mi>s</mml:mi></mml:msqrt><mml:mo>=</mml:mo><mml:mn>13</mml:mn><mml:mtext> </mml: and 13.6 TeV <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"	3.4	0
10	display="inline"><mml:mi>p</mml:mi><mml:mi>p</mml:mi></mml:math> Search for new physics in final states with semivisible jets or anomalous signatures using the ATLAS detector. Physical Review D, 2025, 112, .	3.4	9
11	Azimuthal anisotropies of charged particles with high transverse momentum in Pb	2.1	2
12	Search for charged Higgs bosons produced in top-quark decays or in association with top quarks and decaying via H±→τ±ντ in 13 TeV pp collisions with the ATLAS detector. Physical Review D, 2025, 111, .	3.4	9
13	Testing framework and monitoring system for the ATLAS EventIndex. EPJ Web of Conferences, 2024, 295, 01047.	0.2	1
14	Performance of the ATLAS forward proton Time-of-Flight detector in Run 2. Journal of Instrumentation, 2024, 19, P05054.	0.9	1
15	Beam-induced backgrounds measured in the ATLAS detector during local gas injection into the LHC beam vacuum. Journal of Instrumentation, 2024, 19, P06014.	0.9	1
16	Search for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>R</mml:mi></mml:math> -parity violating supersymmetric decays of the top squark to a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"	3.4	2
17	Search for heavy right-handed Majorana neutrinos in the decay of top quarks produced in proton-proton collisions at s=13 TeV with the ATLAS detector. Physical Review D, 2024, 110, .	3.4	6
18	Disentangling Sources of Momentum Fluctuations in Xe+Xe and Pb+Pb Collisions with the ATLAS Detector. Physical Review Letters, 2024, 133, .	5.8	21

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19	Simultaneous Unbinned Differential Cross-Section Measurement of Twenty-Four Z+jets Kinematic Observables with the ATLAS Detector. Physical Review Letters, 2024, 133, .	5.8	20
20	Jet radius dependence of dijet momentum balance and suppression in Pb + Pb	2.1	7
21	Performance of the ATLAS Level-1 topological trigger in Run 2. European Physical Journal C, 2022, 82, .	3.0	16
22	Measurement of the c-jet mistagging efficiency in $$t\bar{t}$$ events using pp collision data at $$\sqrt{s}=13$$ $$\text {TeV}$$ collected with the ATLAS detector. European Physical Journal C, 2022, 82, .	3.0	59
23	Search for exotic decays of the Higgs boson into b$$ \overline{b} $$ and missing transverse momentum in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2022, 2022, .	3.1	2
24	Observation of electroweak production of two jets in association with an isolated photon and missing transverse momentum, and search for a Higgs boson decaying into invisible particles at 13 $$\text {TeV}$$ with the ATLAS detector. European Physical Journal C, 2022, 82, .	3.0	18
25	Search for Higgs bosons decaying into new spin-0 or spin-1 particles in four-lepton final states with the ATLAS detector with 139 fb−1 of pp collision data at $$ \sqrt{s} $$ = 13 TeV. Journal of High Energy Physics, 2022, 2022, .	3.1	15
26	AtlFast3: The Next Generation of Fast Simulation in ATLAS. Computing and Software for Big Science, 2022, 6, .	2.6	80
27	Search for flavour-changing neutral-current interactions of a top quark and a gluon in pp collisions at $$\sqrt{s}=13$$ TeV with the ATLAS detector. European Physical Journal C, 2022, 82, .	3.0	16
28	Measurement of the energy asymmetry in $$t{\bar{t}}j$$ production at $$13\,$$TeV with the ATLAS experiment and interpretation in the SMEFT framework. European Physical Journal C, 2022, 82, .	3.0	10
29	Determination of the parton distribution functions of the proton using diverse ATLAS data from pp collisions at $$\sqrt{s} = 7$$, 8 and 13 TeV. European Physical Journal C, 2022, 82, .	3.0	37
30	Search for squarks and gluinos in final states with jets and missing transverse momentum using 139 fb−1 of $$ \sqrt{s} $$ = 13 TeV pp collision data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	79
31	Differential cross-section measurements for the electroweak production of dijets in association with a Z boson in proton–proton collisions at ATLAS. European Physical Journal C, 2021, 81, .	3.0	23
32	Measurements of WH and ZH production in the $$H \rightarrow b\bar{b}$$ decay channel in pp collisions at $$13\,\text {Te}\text {V}$$ with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	77
33	Search for dark matter in association with an energetic photon in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	33
34	Search for type-III seesaw heavy leptons in dilepton final states in pp collisions at $$ \sqrt{s} = 13\,{\text {TeV}} $$ with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	28
35	Measurement of light-by-light scattering and search for axion-like particles with 2.2 nb−1 of Pb+Pb data with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	50
36	Search for Higgs boson production in association with a high-energy photon via vector-boson fusion with decay into bottom quark pairs at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	11

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37	Search for new phenomena with top quark pairs in final states with one lepton, jets, and missing transverse momentum in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	31
38	Search for new phenomena in events with two opposite-charge leptons, jets and missing transverse momentum in pp collisions at $$ \sqrt{\mathrm{s}} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	32
39	Search for pair production of scalar leptoquarks decaying into first- or second-generation leptons and top quarks in proton–proton collisions at $$\sqrt{s}$$ = 13 TeV with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	25
40	Measurement of the CP-violating phase $$\phi _s$$ in $$ B_{s}^{0} \rightarrow J/\psi \phi $$ decays in ATLAS at 13 TeV. European Physical Journal C, 2021, 81, .	3.0	29
41	Search for heavy resonances decaying into a pair of Z bosons in the $$\ell ^+\ell ^-\ell '^+\ell '^-$$ and $$\ell ^+\ell ^-\nu {{\bar{\nu }}}$$ final states using 139 $$\mathrm {fb}^{-1}$$ of proton–proton collisions at $$\sqrt{s} = 13\,$$TeV with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	71
42	Search for new phenomena in final states with b-jets and missing transverse momentum in $$ \sqrt{\mathrm{s}} $$ = 13 TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	34
43	Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $$\ell \ell bb$$ and $$\ell \ell WW$$ final states in pp collisions at $$\sqrt{s}=13$$ $$\text {TeV}$$ with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	44
44	Search for doubly and singly charged Higgs bosons decaying into vector bosons in multi-lepton final states with the ATLAS detector using proton-proton collisions at $$ \sqrt{\mathrm{s}} $$ = 13 TeV. Journal of High Energy Physics, 2021, 2021, .	3.1	47
45	Measurements of W+W−+ ≥ 1 jet production cross-sections in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	17
46	Search for charged Higgs bosons decaying into a top quark and a bottom quark at $$ \sqrt{\mathrm{s}} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	87
47	Measurements of Higgs bosons decaying to bottom quarks from vector boson fusion production with the ATLAS experiment at $$\sqrt{s}=13\,\text {TeV}$$. European Physical Journal C, 2021, 81, .	3.0	32
48	Search for pair production of third-generation scalar leptoquarks decaying into a top quark and a τ-lepton in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	38
49	Search for supersymmetry in events with four or more charged leptons in 139 fb−1 of $$ \sqrt{s} $$ = 13 TeV pp collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	28
50	Determination of the parton distribution functions of the proton from ATLAS measurements of differential W± and Z boson production in association with jets. Journal of High Energy Physics, 2021, 2021, .	3.1	19
51	Measurements of differential cross-sections in four-lepton events in 13 TeV proton-proton collisions with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	20
52	A search for the decays of stopped long-lived particles at $$ \sqrt{\mathrm{s}} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	8
53	Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at $$\sqrt{s}=13$$ TeV. European Physical Journal C, 2021, 81, .	3.0	195
54	Search for squarks and gluinos in final states with one isolated lepton, jets, and missing transverse momentum at $$\sqrt{s}=13$$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	25

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55	Measurement of single top-quark production in association with a W boson in the single-lepton channel at $$\sqrt{s} = 8\,\text {TeV}$$ with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	9
56	Jet energy scale and resolution measured in proton–proton collisions at $$\sqrt{s}=13$$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	169
57	Measurements of sensor radiation damage in the ATLAS inner detector using leakage currents. Journal of Instrumentation, 2021, 16, P08025.	0.9	11
58	Measurements of the inclusive and differential production cross sections of a top-quark–antiquark pair in association with a Z boson at $$\sqrt{s} = 13$$ TeV with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	22
59	Search for phenomena beyond the Standard Model in events with large b-jet multiplicity using the ATLAS detector at the LHC. European Physical Journal C, 2021, 81, .	3.0	6
60	Search for dark matter in events with missing transverse momentum and a Higgs boson decaying into two photons in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	27
61	Search for R-parity-violating supersymmetry in a final state containing leptons and many jets with the ATLAS experiment using $$\sqrt{s} = 13\hbox { TeV}$$ proton–proton collision data. European Physical Journal C, 2021, 81, .	3.0	21
62	Measurement of the t$$ \overline{t} $$t$$ \overline{t} $$ production cross section in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	18
63	Search for dark matter produced in association with a Standard Model Higgs boson decaying into b-quarks using the full Run 2 dataset from the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	22
64	Measurement of the production cross section of pairs of isolated photons in pp collisions at 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	13
65	Search for exotic decays of the Higgs boson into long-lived particles in pp collisions at $$ \sqrt{s} $$ = 13 TeV using displaced vertices in the ATLAS inner detector. Journal of High Energy Physics, 2021, 2021, .	3.1	14
66	Search for chargino–neutralino pair production in final states with three leptons and missing transverse momentum in $$\sqrt{s} = 13$$ TeV pp collisions with the ATLAS detector. European Physical Journal C, 2021, 81, .	3.0	82
67	Configuration and performance of the ATLAS b-jet triggers in Run 2. European Physical Journal C, 2021, 81, .	3.0	16
68	Measurement of b-quark fragmentation properties in jets using the decay B± → J/ψK± in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2021, 2021, .	3.1	9
69	Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, .	3.1	28
70	Measurements of the Higgs boson inclusive and differential fiducial cross sections in the 4$$\ell $$ decay channel at $$\sqrt{s}$$ = 13 TeV. European Physical Journal C, 2020, 80, .	3.0	43
71	Search for direct production of electroweakinos in final states with one lepton, missing transverse momentum and a Higgs boson decaying into two b-jets in $$pp$$ collisions at $$\sqrt{s}=13$$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, .	3.0	56
72	Measurements of top-quark pair spin correlations in the $$e\mu $$ channel at $$\sqrt{s} = 13$$ TeV using pp collisions in the ATLAS detector. European Physical Journal C, 2020, 80, .	3.0	43

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73	Higgs boson production cross-section measurements and their EFT interpretation in the $$4\ell $$ decay channel at $$\sqrt{s}=$$13 TeV with the ATLAS detector. European Physical Journal C, 2020, 80, .	3.0	69
74	Search for $$ t\overline{t} $$ resonances in fully hadronic final states in pp collisions at $$ \sqrt{s} $$ = 13 TeV with the ATLAS detector. Journal of High Energy Physics, 2020, 2020, .	3.1	28
75	Reconstruction and identification of boosted di-τ systems in a search for Higgs boson pairs using 13 TeV proton-proton collision data in ATLAS. Journal of High Energy Physics, 2020, 2020, .	3.1	13
76	Search for top squarks in events with a Higgs or Z boson using 139 fb$$^{-1}$$ of pp collision data at $$\sqrt{s}=13$$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, .	3.0	9
77	Evidence for $$t\bar{t}t\bar{t}$$ production in the multilepton final state in proton–proton collisions at $$\sqrt{s}=13$$ $$\text {TeV}$$ with the ATLAS detector. European Physical Journal C, 2020, 80, .	3.0	44
78	Search for heavy diboson resonances in semileptonic final states in pp collisions at $$\sqrt{s}=13$$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, .	3.0	48
79	Search for a scalar partner of the top quark in the all-hadronic $$t{\bar{t}}$$ plus missing transverse momentum final state at $$\sqrt{s}=13$$ TeV with the ATLAS detector. European Physical Journal C, 2020, 80, .	3.0	66
80	Data-centric Graphical User Interface of the ATLAS Event Index Service. EPJ Web of Conferences, 2020, 245, 04036.	0.2	0
81	Alignment of the ATLAS Inner Detector in Run 2. European Physical Journal C, 2020, 80, .	3.0	25
82	The ATLAS EventIndex for LHC Run 3. EPJ Web of Conferences, 2020, 245, 04017.	0.2	2
83	Evidence for Longitudinally Polarized W Production in the Electroweak Production of Sw Sw Sjjs	5.8	6
84	Weakly supervised anomaly detection for resonant new physics in the dijet final state using proton-proton collisions at s	3.4	6
85	Search for decays of the Higgs boson into scalar particles decaying into four or six b quarks using pp	3.4	2
86	Search for events with one displaced vertex from long-lived neutral particles decaying into hadronic jets in the ATLAS muon spectrometer in p	3.4	1
87	Search for electroweak-scale dijet resonances using trigger-level analysis with the ATLAS detector in p 132	3.4	3
88	Evidence for the Dimuon Decay of the Higgs Boson in p p Collisions with the ATLAS Detector. Physical Review Letters, 0, 135, .	5.8	2