

Catherine Vander Velde

List of Publications by Year in descending order

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Version: 2024-02-01

195
papers

19,518
citations

28274

55
h-index

10734

138
g-index

196
all docs

196
docs citations

196
times ranked

10299
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 716, 30-61.	4.1	6,177
2	The CMS experiment at the CERN LHC. Journal of Instrumentation, 2008, 3, S08004-S08004.	1.2	2,192
3	Precise determination of the mass of the Higgs boson and tests of compatibility of its couplings with the standard model predictions using proton collisions at 7 and 8 TeV. European Physical Journal C, 2015, 75, 212.	3.9	541
4	Event generator tunes obtained from underlying event and multiparton scattering measurements. European Physical Journal C, 2016, 76, 155.	3.9	499
5	Combined results of searches for the standard model Higgs boson in pp collisions at $\sqrt{s} = 7$ and 8 TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 716, 30-61.	7.8	400
6	Transverse-Momentum and Pseudorapidity Distributions of Charged Hadrons in pp Collisions at $\sqrt{s} = 7$ and 8 TeV. Physical Review Letters, 2010, 105, 022002.	1.2	348
7	Particle-flow reconstruction and global event description with the CMS detector. Journal of Instrumentation, 2017, 12, P10003-P10003.	1.2	348
8	Observation of a new boson with mass near 125 GeV in pp collisions at $\sqrt{s} = 7$ and 8 TeV. Journal of High Energy Physics, 2013, 2013, 1.	4.7	320
9	The CMS trigger system. Journal of Instrumentation, 2017, 12, P01020-P01020.	1.2	307
10	Measurement of the properties of a Higgs boson in the four-lepton final state. Physical Review D, 2014, 89, .	4.7	299
11	Study of the Mass and Spin-Parity of the Higgs Boson Candidate via Its Decays to $Z\gamma$ and $Z\nu\bar{\nu}$ Boson Pairs. Physical Review Letters, 2013, 110, 081803.	7.8	270
12	Identification of heavy-flavour jets with the CMS detector in pp collisions at 13 TeV. Journal of Instrumentation, 2018, 13, P05011-P05011.	1.2	241
13	Jet energy scale and resolution in the CMS experiment in pp collisions at 8 TeV. Journal of Instrumentation, 2017, 12, P02014-P02014.	1.2	216
14	Observation of $t\bar{t}$ production in pp collisions at $\sqrt{s} = 7$ and 8 TeV. Physical Review Letters, 2018, 120, 231801.	7.8	209
15	Extraction and validation of a new set of CMS pythia8 tunes from underlying-event measurements. European Physical Journal C, 2020, 80, 4.	3.9	198
16	Measurement of the elliptic anisotropy of charged particles produced in PbPb collisions at $\sqrt{s_{NN}} = 2.76$ and 5.02 TeV. Physical Review C, 2013, 87, .	2.9	185
17	Constraints on the spin-parity and anomalous HVV couplings of the Higgs boson in proton collisions at 7 and 8 TeV. Physical Review D, 2015, 92, .	4.7	185
18	Performance of the CMS muon detector and muon reconstruction with proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2018, 13, P06015-P06015.	1.2	180

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#	ARTICLE	IF	CITATIONS
37	Performance of the CMS Level-1 trigger in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2020, 15, P10017-P10017.	1.2	84
38	Performance of missing transverse momentum reconstruction in proton-proton collisions at $\sqrt{s} = 13$ TeV using the CMS detector. Journal of Instrumentation, 2019, 14, P07004-P07004.	1.2	83
39	Study of Vector Boson Scattering and Search for New Physics in Events with Two Same-Sign Leptons and Two Jets. Physical Review Letters, 2015, 114, 051801.	7.8	80
40	Search for new physics in final states with an energetic jet or a hadronically decaying W boson and transverse momentum imbalance at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 75.	4.7	78
41	Search for production of four top quarks in final states with same-sign or multiple leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 75.	3.9	78
42	Search for long-lived particles that decay into final states containing two electrons or two muons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physical Review D, 2015, 91, .	4.7	70
43	Searches for physics beyond the standard model with the M_{T2} variable in hadronic final states with and without disappearing tracks in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2020, 80, 3.	3.9	70
44	Performance of reconstruction and identification of \tilde{l} , leptons decaying to hadrons and \tilde{l}^* in pp collisions at $\sqrt{s} = 13$ TeV. Journal of Instrumentation, 2018, 13, P10005-P10005.	1.2	69
45	Measurements of the Higgs boson width and anomalous HVV couplings from on-shell and off-shell production in the four-lepton final state. Physical Review D, 2019, 99, .	4.7	69
46	Measurement of the $t\bar{t}$ production cross section, the top quark mass, and the strong coupling constant using dilepton events in pp collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 368.	3.9	68
47	Search for new physics in same-sign dilepton events in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2016, 76, 439.	3.9	64
48	Search for electroweak production of charginos and neutralinos in multilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	63
49	A measurement of the Higgs boson mass in the diphoton decay channel. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 805, 135425.	4.1	63
50	Measurement of differential cross sections for Higgs boson production in the diphoton decay channel in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 13.	3.9	62
51	Measurement of the inelastic proton-proton cross section at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	62
52	Electron and photon reconstruction and identification with the CMS experiment at the CERN LHC. Journal of Instrumentation, 2021, 16, P05014.	1.2	62
53	Search for a Narrow Resonance Lighter than 200 GeV Decaying to a Pair of Muons in Proton-Proton Collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2020, 124, 131802.	7.8	61
54	Interpretation of searches for supersymmetry with simplified models. Physical Review D, 2013, 88, .	4.7	58

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55	Measurements of Higgs boson properties in the diphoton decay channel in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	57
56	Identification of heavy, energetic, hadronically decaying particles using machine-learning techniques. Journal of Instrumentation, 2020, 15, P06005-P06005.	1.2	56
57	Limits on the Higgs boson lifetime and width from its decay to four charged leptons. Physical Review D, 2015, 92, .	4.7	55
58	Measurement of the double-differential inclusive jet cross section in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2016, 76, 451.	3.9	55
59	Measurement and QCD analysis of double-differential inclusive jet cross sections in pp collisions at $s = 8$ TeV and cross section ratios to 2.76 and 7 TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	54
60	Search for Charged Higgs Bosons Produced via Vector Boson Fusion and Decaying into a Pair of W and Z Bosons Using pp Collisions at $s=13$ TeV. Physical Review Letters, 2017, 119, 141802.	7.8	54
61	Measurements of the $\sigma(\text{pp} \rightarrow \text{Z}\gamma\gamma)$ production cross section and the $\text{BR}(\text{Z} \rightarrow 4\ell)$ branching fraction, and constraints on anomalous triple gauge couplings at. European Physical Journal C, 2018, 78, 165.	3.9	52
62	Search for the associated production of the Higgs boson with a top-quark pair. Journal of High Energy Physics, 2014, 2014, 1.	4.7	51
63	Search for the associated production of the Higgs boson with a top-quark pair. Journal of High Energy Physics, 2014, 2014, 1.		
64	Pileup mitigation at CMS in 13 TeV data. Journal of Instrumentation, 2020, 15, P09018-P09018.	1.2	47
65	Measurement of diffractive dissociation cross sections in pp collisions at $\sqrt{s}=13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 751, 143-163.	4.7	46
66	Pseudorapidity distribution of charged hadrons in proton-proton collisions at $\sqrt{s}=13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 751, 143-163.	4.1	45
67	Search for Displaced Supersymmetry in Events with an Electron and a Muon with Large Impact Parameters. Physical Review Letters, 2015, 114, 061801.	7.8	44
68	Measurements of properties of the Higgs boson decaying to a W boson pair in pp collisions at $\sqrt{s}=13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 791, 96-129.	4.1	44
69	Identification techniques for highly boosted W bosons that decay into hadrons. Journal of High Energy Physics, 2014, 2014, 1.	4.7	43
70	Measurement of the $\sigma(\text{pp} \rightarrow \text{t}\bar{\text{t}})$ production cross section in the $\text{e}\bar{\text{e}}\gamma$ channel in proton-proton collisions at $s = 7$ and 8 TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	41
71	Constraints on anomalous Higgs boson couplings using production and decay information in the four-lepton final state. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 775, 1-24.	4.1	40
72	Search for disappearing tracks in proton-proton collisions at $\sqrt{s}=13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 806, 135502.	4.1	40

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73	Measurement of the Higgs boson production rate in association with top quarks in final states with electrons, muons, and hadronically decaying tau leptons at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 378.	3.9	40
74	Measurement of the ZZ production cross section and search for anomalous couplings in $2\ell, 2\ell, \ell\ell^2$ final states in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2013, 2013, 1. Observational Constraints on Minimal Anisotropy Primer Harmonics in $\sqrt{s} = 7$ TeV pp Collisions at the LHC . Physical Review Letters, 2013, 111, 022001.	4.7	39
75	$\sqrt{s} = 13 \text{ TeV}$ and $Pb-Pb$ collisions at the LHC. Physical Review Letters, 2013, 111, 022001.	7.8	39
76	Measurement of differential cross sections for Z boson production in association with jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 965.	3.9	39
77	Search for heavy resonances that decay into a vector boson and a Higgs boson in hadronic final states at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2017, 77, 636.	3.9	38
78	Evidence for associated production of a Higgs boson with a top quark pair in final states with electrons, muons, and hadronically decaying l, l , leptons at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1. Production cross sections of WZ and same-sign WW boson pairs in association with two jets in proton-proton collisions at $\sqrt{s} = 13$ TeV . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 134985.	4.7	38
79	$\sqrt{s} = 13 \text{ TeV}$	4.1	37
80	Search for top squarks and dark matter particles in opposite-charge dilepton final states at $\sqrt{s} = 13$ TeV. Physical Review D, 2018, 97, 112001.	4.7	36
81	Search for anomalous electroweak production of vector boson pairs in association with two jets in proton-proton collisions at 13 TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 134985.	4.1	36
82	Measurement of electroweak WZ boson production and search for new physics in WZ + two jets events in pp collisions at $\sqrt{s} = 13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 795, 281-307.	4.1	36
83	Measurements of production cross sections of the Higgs boson in the four-lepton final state in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 488.	3.9	35
84	Search for dark matter produced in association with a leptonically decaying Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 13.	3.9	33
85	Search for top squark pair production using dilepton final states in pp collision data collected at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 3.	3.9	33
86	Search for singly and pair-produced leptoquarks coupling to third-generation fermions in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 819, 136446.	4.1	33
87	Search for a non-standard-model Higgs boson decaying to a pair of new light bosons in four-muon final states. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 726, 564-586.	4.1	32
88	Measurements of the $Z Z$ production cross sections in the $2\ell 2\ell$ channel in proton-proton collisions at $\sqrt{s} = 7$ and $\sqrt{s} = 8$ TeV. European Physical Journal C, 2015, 75, 511.	3.9	32
89	Searches for pair production of third-generation squarks in $\sqrt{s} = 13$ TeV pp collisions. European Physical Journal C, 2017, 77, 327.	3.9	32
90	Shape, transverse size, and charged-hadron multiplicity of jets in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	4.7	31

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91	Search for top squark pair production in pp collisions at $s = 13 \sqrt{s} = 13 \text{ TeV}$ using single lepton events. <i>Journal of High Energy Physics</i> , 2017, 2017, 1.	4.7	31
92	Measurement of differential cross sections for the production of top quark pairs and of additional jets in lepton events from proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Physical Review D</i> , 2018, 2018, 1.	4.7	30
93	Search for invisible decays of the Higgs boson produced via vector boson fusion in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Physical Review D</i> , 2022, 105, .	4.7	30
94	Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at $s = 8 \sqrt{s} = 8 \text{ TeV}$. <i>Journal of High Energy Physics</i> , 2017, 2017, 1.	4.7	29
95	Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>European Physical Journal C</i> , 2019, 79, 280.	3.9	29
96	Search for $\overline{\text{t}}\text{t}$ production in the $\text{H} \rightarrow \text{b}\overline{\text{b}}$ decay channel with leptonic $\overline{\text{t}}\text{t}$ decays in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Journal of High Energy Physics</i> , 2019, 2019, 1.	4.7	28
97	Measurements of differential Z boson production cross sections in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Journal of High Energy Physics</i> , 2019, 2019, 1.	4.7	28
98	Search for new physics in events with a leptonically decaying Z boson and a large transverse momentum imbalance in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>European Physical Journal C</i> , 2018, 78, 291.	3.9	27
99	Performance of the reconstruction and identification of high-momentum muons in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Journal of Instrumentation</i> , 2020, 15, P02027-P02027.	1.2	27
100	Measurements of Higgs boson production cross sections and couplings in the diphoton decay channel at $\sqrt{s} = 13 \text{ TeV}$. <i>Journal of High Energy Physics</i> , 2021, 2021, 1.	4.7	27
101	Search for long-lived particles using nonprompt jets and missing transverse momentum with proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 797, 134876.	4.1	26
102	Search for high-mass resonances in final states with a lepton and missing transverse momentum at $\sqrt{s} = 13 \text{ TeV}$. <i>Journal of High Energy Physics</i> , 2018, 2018, 1.	4.7	25
103	Search for long-lived particles using displaced jets in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Physical Review D</i> , 2018, 2018, 1.	4.7	25
104	Measurement of jet substructure observables in $\text{t}\overline{\text{t}}$ events from proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Physical Review D</i> , 2018, 2018, 1.	4.7	24
105	Measurements of $\text{pp} \rightarrow \text{Z}\text{Z}$ production cross sections and constraints on anomalous triple gauge couplings at $\sqrt{s} = 13 \text{ TeV}$. <i>European Physical Journal C</i> , 2021, 81, 200.	3.9	24
106	Search for supersymmetry in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ using identified top quarks. <i>Physical Review D</i> , 2018, 97, .	4.7	23
107	Measurement of the ZZ production cross section and Z $\rightarrow \text{b}\overline{\text{b}}$ branching fraction in pp collisions at $\sqrt{s} = 13 \text{ TeV}$. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2016, 763, 280-303.	4.1	22
108	Search for direct production of supersymmetric partners of the top quark in the all-jets final state in proton-proton collisions at $s = 13 \sqrt{s} = 13 \text{ TeV}$. <i>Journal of High Energy Physics</i> , 2017, 2017, 1.	4.7	22

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109	Search for direct top squark pair production in events with one lepton, jets, and missing transverse momentum at 13 TeV with the CMS experiment. Journal of High Energy Physics, 2020, 2020, 1.	4.7	21
110	Search for $\overline{t}tH$ production in the all-jet final state in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	20
111	Search for dark matter in events with energetic, hadronically decaying top quarks and missing transverse momentum at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	20
112	Search for associated production of a Higgs boson and a single top quark in proton-proton collisions at $\sqrt{s}=13$ TeV. Physical Review D, 2019, 99, .	4.7	20
113	Measurement of top quark pair production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	20
114	Measurements of production cross sections of polarized same-sign W boson pairs in association with two jets in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2021, 2021, 1.	4.1	20
115	Search for top squark production in fully hadronic final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Physical Review D, 2021, 104, .	4.7	20
116	Measurement of differential and integrated fiducial cross sections for Higgs boson production in the four-lepton decay channel in pp collisions at $\sqrt{s}=7$ and 8 TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	19
117	Search for a very light NMSSM Higgs boson produced in decays of the 125 GeV scalar boson and decaying into $l\bar{l}$, leptons in pp collisions at $\sqrt{s}=8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	19
118	Measurement of the differential cross sections for the associated production of a W boson and jets in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	19
119	Search for charged dark and neutralino production in proton-proton collisions at $\sqrt{s}=13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 778, 262-291.	4.1	19
120	Search for charged Higgs bosons produced in vector boson fusion processes and decaying into vector boson pairs in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 723.	3.9	19
121	Search for top squark pair production in compressed-mass-spectrum scenarios in proton-proton collisions at $\sqrt{s}=8$ TeV using the $l\pm T$ variable. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 767, 402-420.	4.1	19
122	Measurement of the differential Drell-Yan cross section in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	18
123	MUSIC: a model-unspecific search for new physics in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 629.	3.9	18
124	Combined searches for the production of supersymmetric top quark partners in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 970.	3.9	18
125	Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2022, 82, 290.	3.9	18
126	Probing color coherence effects in pp collisions at $\sqrt{s}=7$ TeV. European Physical Journal C, 2014, 74, 2901.	3.9	17

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127	Search for $Z\hat{1}^3$ resonances using leptonic and hadronic final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	17
128	Search for dark matter produced in association with a single top quark or a top quark pair in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	17
129	Combination of CMS searches for heavy resonances decaying to pairs of bosons or leptons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 134952.	4.1	17
130	Constraints on anomalous Higgs boson couplings to vector bosons and fermions in its production and decay using the four-lepton final state. Physical Review D, 2021, 104, .	4.7	16
131	Measurement of the $t\bar{t}\hat{A}^-$ production cross sections in the full kinematic range using	4.7	16
132	Measurement of the $t\bar{t}\hat{A}^-$ production cross section using events with one lepton and at least one jet in pp collisions at $s = 13$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	4.7	15
133	Search for black holes and sphalerons in high-multiplicity final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	14
134	Measurements of the $pp\hat{A}^+WZ$ inclusive and differential production cross sections and constraints on charged anomalous triple gauge couplings at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	14
135	Search for long-lived particles using delayed photons in proton-proton collisions at $\sqrt{s}=13$ TeV. Physical Review D, 2019, 100, .	4.7	14
136	Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in $\sqrt{s_{NN}} = 2.76$ and 5.02 TeV collisions. European Physical Journal C, 2020, 80, 534.	3.9	14
137	Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2020, 2020, 1.	4.7	14
138	Search for long-lived particles decaying to leptons with large impact parameter in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2022, 82, 153.	3.9	14
139	Inclusive nonresonant multilepton probes of new phenomena at $\sqrt{s} = 13$ TeV. Physical Review D, 2022, 105, .	4.7	14
140	Search for the associated production of a Higgs boson with a single top quark in proton-proton collisions at $s = 8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	13
141	Measurement of the underlying event activity in inclusive Z boson production in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	13
142	Measurements of differential cross sections of top quark pair production as a function of kinematic event variables in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	13
143	Studies of charm and beauty hadron long-range correlations in pp and pPb collisions at LHC energies. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 813, 136036.	4.1	13
144	Measurement of the azimuthal anisotropy of and mesons in PbPb collisions at $\sqrt{s_{NN}} = 2.76$ and 5.02 TeV. European Physical Journal C, 2020, 80, 534.	4.1	13

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145	Measurement of the electroweak production of $Z\tau^+\tau^-$ and two jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	13
146	Search for supersymmetry in final states with two or three soft leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	13
147	Search for decays of stopped exotic long-lived particles produced in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	12
148	Search for dark matter produced in association with a Higgs boson decaying to $\tau^+\tau^-$ or $\tau^+\nu_\tau$ at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	12
149	Search for Dark Matter Particles Produced in Association with a Top Quark Pair at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2019, 122, 011803.	7.8	12
150	Search for heavy resonances decaying into two Higgs bosons or into a Higgs boson and a W or Z boson in proton-proton collisions at 13 TeV. Journal of High Energy Physics, 2019, 2019, 1.	4.7	12
151	Development and validation of HERWIG tunes from CMS underlying-event measurements. European Physical Journal C, 2021, 81, 312.	3.9	12
152	Measurement of the CP-violating phase β_s in the $B \rightarrow D^* \tau^+ \tau^-$ decay. Journal of High Energy Physics, 2022, 2022, 1.	4.1	12
153	Search for a right-handed W boson and a heavy neutrino in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	12
154	Identification of hadronic tau lepton decays using a deep neural network. Journal of Instrumentation, 2022, 17, P07023.	1.2	12
155	Search for heavy resonances decaying into a vector boson and a Higgs boson in final states with charged leptons, neutrinos and b quarks at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	11
156	Precision measurement of the structure of the CMS inner tracking system using nuclear interactions. Journal of Instrumentation, 2018, 13, P10034-P10034.	1.2	11
157	Search for a heavy resonance decaying into a Z boson and a vector boson in the $u\bar{u} \rightarrow ZV$ final state. Journal of High Energy Physics, 2018, 2018, 1.	4.7	10
158	Search for heavy resonances decaying to WZ or $W\tau^+\tau^-$ in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	10
159	Search for flavor-changing neutral current interactions for the top quark and Higgs boson in final states with two photons in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2022, 128, 011801.	7.8	10
160	Search for a heavy vector resonance decaying to a Z boson and a Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2021, 81, 688.	3.9	9
161	Search for a heavy resonance decaying to a top and a bottom quark at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2022, 128, 011802.	4.1	9
162	Measurement of the Inclusive and Differential Higgs Boson Production Cross Sections in the Decay Mode to a Pair of Leptons in $p\bar{p}$ Collisions at $\sqrt{s} = 13$ TeV. Physical Review Letters, 2022, 128, 011803.	7.8	9

#	ARTICLE	IF	CITATIONS
163	Search for a heavy resonance decaying into a Z boson and a Z or W boson in $2q$ final states at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	4.7	8
164	Search for direct pair production of scalar top quarks in the single- and dilepton channels in proton-proton collisions at $s = 8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	4.7	7
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167	Search for the associated production of the Higgs boson with a top-quark pair. , 2014, 2014, 1.		6
168	Observation of the $t \rightarrow bW$ decay in proton-proton collisions at $\sqrt{s}=13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 802, 135203.	4.1	6
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170	Inclusive and differential cross section measurements of single top quark production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2022, 2022, 1.	4.7	6
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179	Precision measurement of the W boson decay branching fractions in proton-proton collisions at $\sqrt{s}=13$ TeV. Physical Review Letters, 2022, 129, .	4.7	5
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195	Search for high-mass resonances decaying to a jet and a Lorentz-boosted resonance in proton-proton collisions at $\sqrt{s} = 13$ TeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2022, 832, 137263.	4.1	0