

Roberto Covarelli

List of Publications by Year in descending order

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Version: 2024-02-01

390
papers

23,449
citations

8159

76
h-index

12558

132
g-index

400
all docs

400
docs citations

400
times ranked

10299
citing authors

#	ARTICLE	IF	CITATIONS
1	<p>Combined Measurement of the Higgs Boson Mass in pp Collisions at $\sqrt{s} = 7$ and 8 TeV. European Physical Journal C, 2015, 75, 212.</p>	2.9	1,062
2	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.	1.4	541
3	Determination of jet energy calibration and transverse momentum resolution in CMS. Journal of Instrumentation, 2011, 6, P11002-P11002.	0.5	508
4	Event generator tunes obtained from underlying event and multiparton scattering measurements. European Physical Journal C, 2016, 76, 155.	1.4	499
5	Observation of long-range, near-side angular correlations in proton-proton collisions at the LHC. Journal of High Energy Physics, 2010, 2010, 1.	1.6	497
6	Performance of CMS muon reconstruction in pp collision events at $\sqrt{s} = 7$ TeV. Journal of Instrumentation, 2012, 7, P10002-P10002.	0.5	467
7	Identification of b-quark jets with the CMS experiment. Journal of Instrumentation, 2013, 8, P04013-P04013.	0.5	418
8	Study of high-p T charged particle suppression in PbPb compared to pp collisions at $\sqrt{s_{NN}} = 2.76$ TeV. European Physical Journal C, 2012, 72, 1.	1.4	369
9	Combined measurements of Higgs boson couplings in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 421.	1.4	355
10	Observation of the diphoton decay of the Higgs boson and measurement of its properties. European Physical Journal C, 2014, 74, 3076.	1.4	342
11	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.	1.6	320
12	Search for dark matter, extra dimensions, and unparticles in monojet events in proton-proton collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2015, 75, 235.	1.4	320
13	The Physics of the B Factories. European Physical Journal C, 2014, 74, 1.	1.4	292
14	Measurement of the $B \rightarrow s \gamma$ branching fraction and search for $B \rightarrow s \gamma$ production of charginos, neutralinos, and sleptons decaying to leptons and W, Z, and Higgs bosons in pp collisions at 8 TeV. European Physical Journal C, 2014, 74, 3036.	2.9	282
15	Searches for electroweak production of charginos, neutralinos, and sleptons decaying to leptons and W, Z, and Higgs bosons in pp collisions at 8 TeV. European Physical Journal C, 2014, 74, 3036.	1.4	241
16	Transverse-momentum and pseudorapidity distributions of charged hadrons in pp collisions at $\sqrt{s} = 0.9$ and 2.36 TeV. Journal of High Energy Physics, 2010, 2010, 1.	1.6	230
17	Observation of Sequential Suppression in PbPb Collisions. Physical Review Letters, 2012, 109, 222301.	2.9	220
18	Search for Supersymmetry at the LHC in Events with Jets and Missing Transverse Energy. Physical Review Letters, 2011, 107, 221804.	2.9	208

#	ARTICLE	IF	CITATIONS
19	Suppression of non-prompt J/ψ , prompt J/ψ , and $\Upsilon(1S)$ in PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	200
20	Extraction and validation of a new set of CMS pythia8 tunes from underlying-event measurements. European Physical Journal C, 2020, 80, 4.	1.4	198
21	Measurement of the differential cross section for top quark pair production in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2015, 75, 542.	1.4	191
22	Centrality dependence of dihadron correlations and azimuthal anisotropy harmonics in PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. European Physical Journal C, 2012, 72, 1.	1.4	181
23	Search for heavy neutrinos and W bosons with right-handed couplings in proton-proton collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2014, 74, 3149.	1.4	179

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#	ARTICLE	IF	CITATIONS
37	Search for Dijet Resonances in 7 TeV Collisions at CMS. Physical Review Letters, 2010, 105, 211801.	2.9	126
38	Search for Dark Matter and Large Extra Dimensions in pp Collisions Yielding a Photon and Missing Transverse Energy. Physical Review Letters, 2012, 108, 261803.	2.9	126
39	Measurement of differential top-quark-pair production cross sections in pp collisions at $\sqrt{s} = 7\text{ TeV}$. European Physical Journal C, 2013, 73, 1.	1.4	125
40	Evidence for the 125 GeV Higgs boson decaying to a pair of τ , leptons. Journal of High Energy Physics, 2014, 2014, 1.	1.6	123
41	Precision luminosity measurement in proton-proton collisions at $\sqrt{s} = 13, 14\text{ TeV}$ in 2015 and 2016 at CMS. European Physical Journal C, 2021, 81, 800.	1.4	123
42	Measurements of inclusive W and Z cross sections in pp collisions at $\sqrt{s} = 7\text{ TeV}$. Journal of High Energy Physics, 2011, 2011, 1.	1.6	122
43	CMS tracking performance results from early LHC operation. European Physical Journal C, 2010, 70, 1165-1192.	1.4	120
44	Searches for long-lived charged particles in pp collisions at $\sqrt{s} = 7$ and 8 TeV . Journal of High Energy Physics, 2013, 2013, 1.	1.6	118
45	Search for a light charged Higgs boson in top quark decays in pp collisions at $\sqrt{s} = 7\text{ TeV}$. Journal of High Energy Physics, 2012, 2012, 1.	1.6	117
46	Observation of the Associated Production of a Single Top Quark and a W Boson in pp Collisions at CMS. Physical Review Letters, 2011, 106, 231801.	2.9	108
47	Charged particle multiplicities in pp interactions at $\sqrt{s} = 0.9, 2.36, \text{ and } 7\text{ TeV}$. Journal of High Energy Physics, 2011, 2011, 1.	1.6	106
48	Charged-particle nuclear modification factors in PbPb and pPb collisions at $\sqrt{s_{NN}} = 5.02\text{ TeV}$. Journal of High Energy Physics, 2017, 2017, 1.	1.6	103
49	Missing transverse energy performance of the CMS detector. Journal of Instrumentation, 2011, 6, P09001-P09001.	0.5	102
50	Measurements of properties of the Higgs boson decaying into the four-lepton final state in pp collisions at $\sqrt{s} = 13\text{ TeV}$. Journal of High Energy Physics, 2017, 2017, 1.	1.6	101
51	Search for new physics in the multijet and missing transverse momentum final state in proton-proton collisions at $\sqrt{s} = 8\text{ TeV}$. Journal of High Energy Physics, 2014, 2014, 1.	1.6	100
52	Dependence on pseudorapidity and on centrality of charged hadron production in PbPb collisions at $\sqrt{s_{NN}} = 2.76\text{ TeV}$. Journal of High Energy Physics, 2011, 2011, 1.	1.6	99
53	Measurement of the underlying event activity at the LHC with $\sqrt{s} = 7\text{ TeV}$ and comparison with $\sqrt{s} = 0.9\text{ TeV}$. Journal of High Energy Physics, 2011, 2011, 1.	1.6	97
54	Improved Measurement of CP Asymmetries in $B^0 \rightarrow K^0(*)$ Decays. Physical Review Letters, 2005, 94, 161803.	2.9	95

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55	Search for supersymmetry in hadronic final states using M T2 in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	95
56	Search for a Higgs boson in the mass range from 145 to 1000 GeV decaying to a pair of W or Z bosons. Journal of High Energy Physics, 2015, 2015, 1.	1.6	92
57	Performance of τ, q -lepton reconstruction and identification in CMS. Journal of Instrumentation, 2012, 7, P01001-P01001.	0.5	91
58	Searches for new physics using $\theta\phi$ -invariant mass distribution in pp collisions at $\sqrt{s}=8$ TeV. Physical Review Letters, 2013, 111, 211804.	2.9	90
59	Measurements of differential and double-differential Drell-Yan cross sections in proton-proton collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2015, 75, 147.	1.4	88
60	Search for high-mass resonances in dilepton final states in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	86
61	Measurement of jet fragmentation into charged particles in pp and PbPb collisions at $\sqrt{s_{\text{NN}}}=2.76$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	85
62	A New Boson with a Mass of 125 GeV Observed with the CMS Experiment at the Large Hadron Collider. Science, 2012, 338, 1569-1575.	6.0	85
63	Study of double parton scattering using W + 2-jet events in proton-proton collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	85
64	Search for massive resonances in dijet systems containing jets tagged as W or Z boson decays in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	85
65	Study of the production of charged pions, kaons, and protons in pPb collisions at $\sqrt{s_{\text{NN}}}=5.02$ TeV. European Physical Journal C, 2014, 74, 2847.	1.4	85
66	Performance of the CMS Level-1 trigger in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of Instrumentation, 2020, 15, P10017-P10017.	0.5	84
67	Measurement of the single-top-quark t-channel cross section in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	83
68	Measurement of the differential cross section and charge asymmetry for inclusive $p \rightarrow W + X$ production at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 469.	1.4	83
69	Measurement of prompt and nonprompt charmonium suppression in PbPb collisions at 5.02 TeV. European Physical Journal C, 2018, 78, 509.	1.4	83
70	Suppression and azimuthal anisotropy of prompt and nonprompt J/ψ production in PbPb collisions at $\sqrt{s_{\text{NN}}}=2.76$ TeV. European Physical Journal C, 2017, 77, 252.	1.4	82
71	J/ψ and $\Upsilon(2S)$ production in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	81
72	Search for neutral MSSM Higgs bosons decaying to a pair of tau leptons in pp collisions. Journal of High Energy Physics, 2014, 2014, 1.	1.6	81

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73	Study of Z Boson Production in PbPb Collisions at $\sqrt{s_{NN}} = 2.76$ TeV. European Physical Journal C, 2014, 14, 1.	2.9	80
74	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.	1.4	78
75	Time-integrated and time-dependent angular analyses of $J/\psi \rightarrow e^+e^-$: A measurement of $\cos^2\theta_{12}$ with no sign ambiguity from strong phases. Physical Review D, 2005, 71, .	1.6	77
76	Studies of azimuthal dihadron correlations in ultra-central PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	77
77	Search for Top-Quark Partners with Charge $\pm 2/3$ in the Same-Sign Dilepton Final State. Physical Review Letters, 2014, 112, 171801.	2.9	76
78	Study of exclusive two-photon production of $W+W^*$ in pp collisions at $\sqrt{s} = 7$ TeV and constraints on anomalous quartic gauge couplings. Journal of High Energy Physics, 2013, 2013, 1.	1.6	75
79	Studies of dijet transverse momentum balance and pseudorapidity distributions in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. European Physical Journal C, 2014, 74, 1.	1.4	75
80	Measurement of the W^+W^- cross section in pp collisions at $\sqrt{s} = 8$ TeV and limits on anomalous gauge couplings. European Physical Journal C, 2016, 76, 401.	1.4	74
81	Measurement of the $X(3872)$ production cross section via decays to $J/\psi + \bar{\psi}\psi$ in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	73
82	Search for a standard model Higgs boson produced in association with a top-quark pair and decaying to bottom quarks using a matrix element method. European Physical Journal C, 2015, 75, 251.	1.4	73
83	Measurement of the t-channel single-top-quark production cross section and of the $ V_{tb} $ CKM matrix element in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	70
84	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.	1.4	70
85	Measurement of the $\overline{t}t$ production cross section in the dilepton channel in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	69
86	Search for massive resonances decaying into pairs of boosted bosons in semi-leptonic final states at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	69
87	Search for anomalous production of multilepton events in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	68
88	Search for a standard-model-like Higgs boson with a mass in the range 145 to 1000 GeV at the LHC. European Physical Journal C, 2013, 73, 2469.	1.4	68
89	Measurement of the differential and double-differential Drell-Yan cross sections in proton-proton collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	68
90	Measurement of the inclusive 3-jet production differential cross section in proton-proton collisions at 7 TeV and determination of the strong coupling constant in the TeV range. European Physical Journal C, 2015, 75, 186.	1.4	68

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91	Measurement of the $\overline{\sigma}(\text{pp} \rightarrow t\bar{t})$ production cross section, the top quark mass, and the strong coupling constant using dilepton events in pp collisions at. European Physical Journal C, 2019, 79, 368.	1.4	68
92	Long-range and short-range dihadron angular correlations in central PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	65
93	Search for a Light Pseudoscalar Higgs Boson in the Dimuon Decay Channel in pp Collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2014, 74, 3129.	2.9	65
94	Observation of a New Λ_b^0 Baryon. Physical Review Letters, 2012, 108, 252002.	2.9	65
95	Measurement of differential cross sections for the production of a pair of isolated photons in pp collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2014, 74, 3129.	1.4	65
96	Measurement of the sum of WW and WZ production with W+dijet events in pp collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2013, 73, 2283.	1.4	64
97	Search for Flavor-Changing Neutral Currents in Top-Quark Decays in pp Collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2013, 73, 2283.	2.9	64
98	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.	1.4	64
99	Search for Signatures of Extra Dimensions in the Diphoton Mass Spectrum at the Large Hadron Collider. Physical Review Letters, 2012, 108, 111801.	2.9	63
100	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.	1.6	63
101	Measurement of the Pseudorapidity and Centrality Dependence of the Transverse Energy Density in Pb-Pb Collisions at $\sqrt{s_{NN}} = 2.76$ TeV. Physical Review Letters, 2012, 109, 152303.	2.9	62
102	Measurement of the $W+W\bar{a}'$ cross section in pp collisions at $\sqrt{s} = 7$ TeV and limits on anomalous $WW\bar{1}^3$ and WWZ couplings. European Physical Journal C, 2013, 73, 1.	1.4	62
103	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.	1.4	62
104	Measurement of the inelastic proton-proton cross section at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	62
105	Measurement of the $\sigma(\text{pp} \rightarrow B\bar{0})$ Production Cross Section in pp Collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2013, 73, 1.	2.9	61
106	Measurement of prompt J/ψ pair production in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	61
107	Measurement of the ratio of the inclusive 3-jet cross section to the inclusive 2-jet cross section in pp collisions at $\sqrt{s} = 7$ TeV and first determination of the strong coupling constant in the TeV range. European Physical Journal C, 2013, 73, 1.	1.4	60
108	Performance and operation of the CMS electromagnetic calorimeter. Journal of Instrumentation, 2010, 5, T03010-T03010.	0.5	59

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109	Alignment of the CMS silicon tracker during commissioning with cosmic rays. Journal of Instrumentation, 2010, 5, T03009-T03009.	0.5	59
110	Measurement of the lepton charge asymmetry in inclusive W production in pp collisions at $\sqrt{s} = 7\text{ TeV}$. Journal of High Energy Physics, 2011, 2011, 1.	1.6	59
111	Search for anomalous t production in the highly-boosted all-hadronic final state. Journal of High Energy Physics, 2012, 2012, 1.	1.6	58
112	Jet production rates in association with W and Z bosons in pp collisions at $\sqrt{s} = 7\text{ TeV}$. Journal of High Energy Physics, 2012, 2012, 1.	1.6	58
113	Studies of jet mass in dijet and $W/Z + \text{jet}$ events. Journal of High Energy Physics, 2013, 2013, 1.	1.6	58
114	Nuclear effects on the transverse momentum spectra of charged particles in pPb collisions at $\sqrt{s_{\text{NN}}} = 5.02\text{ TeV}$. European Physical Journal C, 2015, 75, 237.	1.4	58
115	Measurement of the weak mixing angle using the forward-backward asymmetry of Drell-Yan events in $p\text{-}p$ collisions at 8 TeV . European Physical Journal C, 2018, 78, 701.	1.4	58
116	Identification and filtering of uncharacteristic noise in the CMS hadron calorimeter. Journal of Instrumentation, 2010, 5, T03014-T03014.	0.5	57
117			

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127	Constraints on parton distribution functions and extraction of the strong coupling constant from the inclusive jet cross section in pp collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2015, 75, 288.	1.4	54
128	Measurement and QCD analysis of double-differential inclusive jet cross sections in pp collisions at $\sqrt{s} = 8$ TeV and cross section ratios to 2.76 and 7 TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	54
129	Measurement of the $t\bar{t}$ production cross section and the top quark mass in the dilepton channel in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	53
130	Measurement of prompt and nonprompt J/ψ production in pp and pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. European Physical Journal C, 2017, 77, 269.	1.4	53
131	Performance of CMS muon reconstruction in cosmic-ray events. Journal of Instrumentation, 2010, 5, T03022-T03022.	0.5	52
132	Measurement of double-differential cross sections for top quark pair production in pp collisions at $\sqrt{s} = 8$ TeV and impact on parton distribution functions. European Physical Journal C, 2017, 77, 459.	1.4	52
133	Measurements of the $p\bar{p} \rightarrow Z\gamma$ production cross section and the $Z \rightarrow 4\ell$ branching fraction, and constraints on anomalous triple gauge couplings at. European Physical Journal C, 2018, 78, 165.	1.4	52
134	Search for exclusive or semi-exclusive $\tilde{\chi}_1^0\tilde{\chi}_1^0$ production and observation of exclusive and semi-exclusive e^+e^- production in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	51
135	Search for the associated production of the Higgs boson with a top-quark pair. Journal of High Energy Physics, 2014, 2014, 1.	1.6	51
136	First measurement of the underlying event activity at the LHC with $\sqrt{s} = 0.9$ TeV. European Physical Journal C, 2010, 70, 555-572.	1.4	50
137	Search for $B_s^0 \rightarrow \tau^+ \tau^-$ and $B^0 \rightarrow \tau^+ \tau^-$ Decays in pp Collisions at $\sqrt{s} = 7$ TeV. Physical Review Letters, 2014, 107, 151802.		
138	Study of the underlying event at forward rapidity in pp collisions at $\sqrt{s} = 0.9, 2.76, 7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	50
139	Search for new physics with jets and missing transverse momentum in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	49
140	Search for leptonic decays of $W^{\pm 2}$ bosons in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	49
141	Measurement of pseudorapidity distributions of charged particles in proton-proton collisions at $\sqrt{s} = 8$ TeV by the CMS and TOTEM experiments. European Physical Journal C, 2014, 74, 1.	1.4	49
142	Search for new physics in events with same-sign dileptons and jets in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	48
143	Search for vector-like quarks in events with two oppositely charged leptons and jets in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 364.	1.4	48
144	Search for Supersymmetry in pp Collisions at $\sqrt{s} = 7$ TeV in Events with Two Photons and Missing Transverse Energy. Physical Review Letters, 2011, 106, 211802.	2.9	47

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145	Measurement of the cross section and angular correlations for associated production of a Z boson with b hadrons in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	47
146	Search for new physics with same-sign isolated dilepton events with jets and missing transverse energy at the LHC. Journal of High Energy Physics, 2011, 2011, 1.	1.6	46
147	Search for narrow resonances and quantum black holes in inclusive and b-tagged dijet mass spectra from pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	46
148	Search for third-generation scalar leptoquarks decaying to a top quark and a τ lepton at $\sqrt{s}=13$ TeV. European Physical Journal C, 2018, 78, 707.	1.4	46
149	Search for heavy bottom-like quarks in 4.9 fb^{-1} of pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	45
150	Search for Top Squark and Higgsino Production Using Diphoton Higgs Boson Decays. Physical Review Letters, 2014, 112, 161802.	2.9	45
151	Search for microscopic black holes in pp collisions at $\sqrt{s}=8$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	44
152	Search for decays of stopped long-lived particles produced in proton-proton collisions at $\sqrt{s}=8$ TeV. European Physical Journal C, 2015, 75, 151.	1.4	44
153	Search for standard model production of four top quarks with same-sign and multilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 140.	1.4	44
154	Search for the Decay $B \rightarrow K + \tau + \bar{\nu}_\tau$. Physical Review Letters, 2005, 94, 101801.	2.9	43
155	Measurement of top quark-antiquark pair production in association with a W or Z boson in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2014, 74, 3060.	1.4	43
156	Identification techniques for highly boosted W bosons that decay into hadrons. Journal of High Energy Physics, 2014, 2014, 1.	1.6	43
157	Constraints on the pMSSM, AMSB model and on other models from the search for long-lived charged particles in proton-proton collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2015, 75, 325.	1.4	43
158	Measurement of the top-quark mass in $\overline{t}t$ events with dilepton final states in pp collisions at $\sqrt{s}=7$ TeV. European Physical Journal C, 2012, 72, 1.	1.4	42
159	Search for electroweak production of charginos and neutralinos using leptonic final states in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	41
160	Measurement of the $\overline{t}t$ production cross section in the $e\tau$ channel in proton-proton collisions at $\sqrt{s}=7$ and 8 TeV. Journal of High Energy Physics, 2016, 2016, 1.	1.6	41
161	Measurement of the $\overline{t}t$ production cross section in the all-jets final state in pp collisions at $\sqrt{s}=8$ TeV. European Physical Journal C, 2016, 76, 128.	1.4	41
162	Search for same-sign top-quark pair production at $\sqrt{s} = 7$ TeV and limits on flavour changing neutral currents in the top sector. Journal of High Energy Physics, 2011, 2011, 1.	1.6	40

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163	Measurement of the $\sigma(\text{pp} \rightarrow t\bar{t}\gamma)$ production cross section using events in the $e^+e^- \rightarrow \mu^+\mu^-\gamma$ final state in pp collisions at $\sqrt{s}=13, \text{ext}\{\text{TeV}\}$ $s = 13$ TeV. European Physical Journal C, 2017, 77, 172.	1.4	40
164	Search for new physics in dijet angular distributions using proton-proton collisions at $\sqrt{s}=13, \text{ext}\{\text{TeV}\}$ and constraints on dark matter and other models. European Physical Journal C, 2018, 78, 789.	1.4	40
165	Measurement of the top quark mass in the all-jets final state at $\sqrt{s}=13, \text{ext}\{\text{TeV}\}$ $s = 13$ TeV and combination with the lepton+jets channel. European Physical Journal C, 2019, 79, 313.	1.4	40
166	Measurement of the Higgs boson production rate in association with top quarks in final states with electrons, muons, and hadronically decaying tau leptons at $\sqrt{s} = 13, \text{ext}\{\text{TeV}\}$ $s = 13$ TeV. European Physical Journal C, 2021, 81, 378.	1.4	40
167	Search for resonances in the dilepton mass distribution in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	39
168	Inclusive b-jet production in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	39
169	Measurement of the $Z/\gamma^* \rightarrow b\bar{b}$ -jet cross section in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	39
170	Search for the standard model Higgs boson produced in association with a top-quark pair in pp collisions at the LHC. Journal of High Energy Physics, 2013, 2013, 1.	1.6	39
171	Measurement of the ZZ production cross section and search for anomalous couplings in $2\gamma, \gamma\gamma, \gamma Z$ final states in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	39
172	Measurement of the production cross sections for a Z boson and one or more b jets in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	39
173	Measurement of differential cross sections for Z boson production in association with jets in proton-proton collisions at $\sqrt{s} = 13, \text{ext}\{\text{TeV}\}$ $s = 13$ TeV. European Physical Journal C, 2018, 78, 965.	1.4	39
174	Search for heavy stable charged particles in pp collisions at $\sqrt{s} = 7; \text{ext}\{\text{TeV}\}$ $s = 7$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	38
175	Measurement of the top-quark mass in $t\bar{t}$ events with lepton+jets final states in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	38
176	Search for dark matter produced in association with heavy-flavor quark pairs in proton-proton collisions at $\sqrt{s}=13, \text{ext}\{\text{TeV}\}$ $s = 13$ TeV. European Physical Journal C, 2017, 77, 845.	1.4	38
177	Search for heavy resonances that decay into a vector boson and a Higgs boson in hadronic final states at $\sqrt{s} = 13, \text{ext}\{\text{TeV}\}$ $s = 13$ TeV. European Physical Journal C, 2017, 77, 636.	1.4	38
178	Evidence for associated production of a Higgs boson with a top quark pair in final states with electrons, muons, and hadronically decaying l, ν_l leptons at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	38
179	Commissioning of the CMS experiment and the cosmic run at four tesla. Journal of Instrumentation, 2010, 5, T03001-T03001.	0.5	37
180	Measurement of the $\sigma(\text{pp} \rightarrow \tau^+\tau^-)$ production cross section in pp collisions at $\sqrt{s}=7$ TeV using the kinematic properties of events with leptons and jets. European Physical Journal C, 2011, 71, 1.	1.4	37

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182	Measurement of the WZ production cross section in pp collisions at $\sqrt{s} = 7$ and 8 TeV and search for anomalous triple gauge couplings at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2017, 77, 236.	1.4	37
183	Precise mapping of the magnetic field in the CMS barrel yoke using cosmic rays. Journal of Instrumentation, 2010, 5, T03021-T03021.	0.5	36
184	Measurement of the Drell-Yan cross section in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	36
185	Measurement of the top-quark mass in all-jets $t\bar{t}$ events in pp collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2014, 74, 2758.	1.4	35
186	Measurement of exclusive Υ photoproduction from protons in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. European Physical Journal C, 2019, 79, 277.	1.4	35
187	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.	1.4	35
188	Observation of Z decays to four leptons with the CMS detector at the LHC. Journal of High Energy Physics, 2012, 2012, 1.	1.6	34
189	Search for microscopic black holes in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	34
190	Search for supersymmetry in final states with missing transverse energy and 0, 1, 2, or 3 b-quark jets in 7 TeV pp collisions using the variable \hat{T} . Journal of High Energy Physics, 2013, 2013, 1.	1.6	34
191	Searches for supersymmetry using the M_{T2} variable in hadronic events produced in pp collisions at 8 TeV. Journal of High Energy Physics, 2015, 2015, 1.	1.6	34
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193	Measurements of the $t\bar{t}$ production cross section in lepton+jets final states in pp collisions at 8 TeV and ratio of 8 to 7 TeV cross sections. European Physical Journal C, 2017, 77, 15.	1.4	34
194	Measurement of the top quark mass with lepton+jets final states using pPb collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2018, 78, 891.	1.4	34
195	Search for single production of vector-like quarks decaying to a top quark and a W boson in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 90.	1.4	34
196	Measurement of the underlying event in the Drell-Yan process in proton-proton collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2012, 72, 1.	1.4	33
197	Search for new physics in events with same-sign dileptons and b jets in pp collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	33
198	Measurement of exclusive ρ^0 photoproduction in ultraperipheral pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. European Physical Journal C, 2019, 79, 702.	1.4	33

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200	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.	1.4	33
201	Measurement of normalised multi-differential cross sections in pp collisions at $\sqrt{s}=13$ TeV, and simultaneous determination of the strong coupling strength, top quark pole mass, and parton distribution functions. European Physical Journal C, 2020, 80, 1.	1.4	33
202	Measurement of $\overline{B}B$ angular correlations based on secondary vertex reconstruction at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	32
203	Search for supersymmetry in pp collisions at $\sqrt{s}=7$ TeV in events with a single lepton, jets, and missing transverse momentum. Journal of High Energy Physics, 2011, 2011, 1.	1.6	32
204	Search in leptonic channels for heavy resonances decaying to long-lived neutral particles. Journal of High Energy Physics, 2013, 2013, 1.	1.6	32
205	Jet and underlying event properties as a function of charged-particle multiplicity in proton-proton collisions at $\sqrt{s}=7$ TeV. European Physical Journal C, 2013, 73, 2674.	1.4	32
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207	Searches for pair production of third-generation squarks in $\sqrt{s}=13$ TeV pp collisions. European Physical Journal C, 2017, 77, 327.	1.4	32
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209	Measurement of the triple-differential cross section for photon + jets production in proton-proton collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	31
210	Measurement of electroweak production of two jets in association with a Z boson in proton-proton collisions at $\sqrt{s}=8$ TeV. European Physical Journal C, 2015, 75, 66.	1.4	31
211	Search for top squark pair production in pp collisions at $\sqrt{s}=13$ TeV using single lepton events. Journal of High Energy Physics, 2017, 2017, 1.	1.6	31
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213	Measurement of Bose-Einstein correlations in pp collisions at $\sqrt{s}=0.9$ and 7 TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	30
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219	Search for supersymmetry in events with b jets and missing transverse momentum at the LHC. Journal of High Energy Physics, 2011, 2011, 1.	1.6	29
220	Measurement of inclusive jet production and nuclear modifications in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. European Physical Journal C, 2016, 76, 372.	1.4	29
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222	Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at $\sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2017, 2017, 1.	1.6	29
223	Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in proton-proton collisions at $\sqrt{s} = 13$ TeV. European Physical Journal C, 2019, 79, 280.	1.4	29
224	Search for $\overline{\text{t}}\text{tH}$ production in the $\text{H} \rightarrow \overline{\text{b}}\text{b}$ decay channel with leptonic $\overline{\text{t}}\text{t}$ decays in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	1.6	28
225	Measurements of differential Z boson production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2019, 2019, 1.	1.6	28
226	Measurement of the $B \rightarrow K^*(1430) \ell^+ \ell^-$ and $B \rightarrow K^*(1430) \ell^+ \ell^-$ branching fractions. Physical Review D, 2004, 70, .	1.6	27
227	Study of Z production in PbPb and pp collisions at $\sqrt{s_{NN}} = 2.76$ TeV in the dimuon and dielectron decay channels. Journal of High Energy Physics, 2015, 2015, 1.	1.6	27
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232	Search for resonant $\overline{\text{t}}\text{t}$ production in lepton+jets events in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	26
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241	Forward-backward asymmetry of Drell-Yan lepton pairs in pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2016, 76, 325.	1.4	25
242	Search for high-mass resonances in final states with a lepton and missing transverse momentum at $\sqrt{s} = 13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	25
243	Performance of the CMS drift tube chambers with cosmic rays. Journal of Instrumentation, 2010, 5, T03015-T03015.	0.5	24
244	Measurement of the $t\bar{t}$ production cross section in the $t\bar{t}, +jets$ channel in pp collisions at $\sqrt{s} = 7$ TeV. European Physical Journal C, 2013, 73, 1.	1.4	24
245	Search for third-generation scalar leptoquarks in the $t\bar{t}$ channel in proton-proton collisions at $s = 8 \sqrt{s} = 8$ TeV. Journal of High Energy Physics, 2015, 2015, 1.	1.6	24
246	Search for vector-like T quarks decaying to top quarks and Higgs bosons in the all-hadronic channel using jet substructure. Journal of High Energy Physics, 2015, 2015, 1.	1.6	24
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251	Measurement of the jet mass in highly boosted $t\bar{t}$ events from pp collisions at $\sqrt{s} = 8$ TeV. European Physical Journal C, 2017, 77, 467.	1.4	23
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261	A Deep Neural Network for Simultaneous Estimation of b Jet Energy and Resolution. Computing and Software for Big Science, 2020, 4, 10.	1.3	21
262	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.	1.6	21
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264	Performance of the CMS cathode strip chambers with cosmic rays. Journal of Instrumentation, 2010, 5, T03018-T03018.	0.5	20
265	Measurement of the inclusive Z cross section via decays to tau pairs in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2011, 2011, 1.	1.6	20
266	Search for exotic resonances decaying into WZ/ZZ in pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	20
267	Search for supersymmetry in pp collisions at $\sqrt{s} = 7$ TeV in events with a single lepton, jets, and missing transverse momentum. European Physical Journal C, 2013, 73, 2404.	1.4	20
268	Measurements of the $\overline{\text{t}}\text{t}$ charge asymmetry using the dilepton decay channel in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2014, 2014, 1.	1.6	20
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270	Search for $\overline{\text{t}}\text{t}\text{H}$ production in the all-jet final state in proton-proton collisions at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	20

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277	Search for a very light NMSSM Higgs boson produced in decays of the 125 GeV scalar boson and decaying into $\tilde{l},$ leptons in pp collisions at $s=8$ TeV. Journal of High Energy Physics, 2016, 2016, 1.	1.6	19
278	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.	1.4	19
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281	Improved limits on $B^0 \rightarrow \text{invisible}$ decays to invisible particles in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 629.	1.6	18
282	Search for quark compositeness in dijet angular distributions from pp collisions at $\sqrt{s}=7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	18
283	Search for direct pair production of supersymmetric top quarks decaying to all-hadronic final states in pp collisions at $\sqrt{s}=8$ TeV. European Physical Journal C, 2016, 76, 460.	1.4	18
284	Measurement of differential cross sections for inclusive isolated-photon and photon+jet production in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 20.	1.4	18
285	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.	1.6	18
286	MUSIC: a model-unspecific search for new physics in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2021, 81, 629.	1.4	18
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290	Calibration of the CMS drift tube chambers and measurement of the drift velocity with cosmic rays. Journal of Instrumentation, 2010, 5, T03016-T03016.	0.5	17
291	Search for stopped long-lived particles produced in pp collisions at $\sqrt{s} = 7 \text{ TeV}$. Journal of High Energy Physics, 2012, 2012, 1.	1.6	17
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295	Probing color coherence effects in pp collisions at $\sqrt{s} = 7 \text{ TeV}$. European Physical Journal C, 2014, 74, 2901.	1.4	17
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297	Measurement of charged particle spectra in minimum-bias events from proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. European Physical Journal C, 2018, 78, 697.	1.4	17
298	Electroweak production of two jets in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. European Physical Journal C, 2018, 78, 1.	1.4	17
299	Search for dark matter produced in association with a single top quark or a top quark pair in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. Journal of High Energy Physics, 2019, 2019, 1.	1.6	17
300	Measurement of the inclusive production cross sections for forward jets and for dijet events with one forward and one central jet in pp collisions at $\sqrt{s} = 7 \text{ TeV}$. Journal of High Energy Physics, 2012, 2012, 1.	1.6	16
301	Measurement of the $\overline{\text{t}}\text{t}$ production cross section in the all-jet final state in pp collisions at $\sqrt{s} = 7 \text{ TeV}$. Journal of High Energy Physics, 2013, 2013, 1.	1.6	16
302	Measurement of the hadronic activity in events with a Z and two jets and extraction of the cross section for the electroweak production of a Z with two jets in pp collisions at $\sqrt{s} = 7 \text{ TeV}$. Journal of High Energy Physics, 2013, 2013, 1.	1.6	16
303	Measurement of jet multiplicity distributions in $\overline{\text{t}}\text{t}$ production in pp collisions at $\sqrt{s} = 7 \text{ TeV}$. European Physical Journal C, 2014, 74, 3014.	1.4	16
304	Search for lepton flavour violating decays of heavy resonances and quantum black holes to an μe pair in proton-proton collisions at $\sqrt{s} = 8 \text{ TeV}$. European Physical Journal C, 2016, 76, 317.	1.4	16
305	Measurement of dijet azimuthal decorrelation in pp collisions at $\sqrt{s} = 8 \text{ TeV}$. European Physical Journal C, 2016, 76, 536.	1.4	16
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309	Search for a fermiophobic Higgs boson in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2012, 2012, 1.	1.6	15
310	Measurement of the mass difference between top and antitop quarks. Journal of High Energy Physics, 2012, 2012, 1.	1.6	15
311	Search for new physics in events with photons, jets, and missing transverse energy in pp collisions at $\sqrt{s} = 7$ TeV. Journal of High Energy Physics, 2013, 2013, 1.	1.6	15
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315	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.	1.6	14
316	Studies of $B_s^0 \rightarrow B_s^0 \gamma$ and $B_s^0 \rightarrow B_s^0 \gamma \gamma$		

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326	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.	1.6	13
327	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.	1.6	13
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329	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.	1.6	12
330	Search for dark matter produced in association with a Higgs boson decaying to $\tau^+ \tau^-$ or $\tau^+ \tau^- \gamma$ at $\sqrt{s}=13$ TeV. Journal of High Energy Physics, 2018, 2018, 1.	1.6	12
331	Measurement of the energy density as a function of pseudorapidity in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 1.	1.4	12
332	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.	1.6	12
333	Measurement of the average very forward energy as a function of the track multiplicity at central pseudorapidities in proton-proton collisions at $\sqrt{s}=13$ TeV. European Physical Journal C, 2019, 79, 893.	1.4	12
334	Development and validation of HERWIG++ tunes from CMS underlying-event measurements. European Physical Journal C, 2021, 81, 312.	1.4	12
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