

კვანტური ფიზიკისა და საინჟინრო ტექნოლოგიების ინსტიტუტი

/ინსტიტუტის დასახელება/

იმპაქტფაქტორიან გამოცემებში გამოქვეყნებული სტატიები 2023 წწ.

N	სტატიის დასახელება	სტატიის ავტორი/ავტორები	გამოქვეყნების წელი	იმპაქტფაქტორის სტატუსის მქონე გამოცემის(ჟურნალის) დასახელება	ბაზის დასახელება
1.	Search for top squark pair production in a final state with at least one hadronically decaying tau lepton in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
2.	Combination of inclusive top-quark pair production cross-section measurements using ATLAS and CMS data at $s = 7$ and 8 TeV	Aad G. et al.	2023	Journal of High Energy Physics	Scopus
3.	Search for CP violation using (Formula presented.) events in the lepton+jets channel in pp collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
4.	Neutron irradiation and electrical characterisation of the first 8" silicon pad sensor prototypes for the CMS calorimeter endcap upgrade	Acar B. et al.	2023	Journal of Instrumentation	Scopus

5.	Measurement of inclusive and differential cross sections for single top quark production in association with a W boson in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
6.	Search for medium effects using jets from bottom quarks in PbPb collisions at $s_{NN}=5.02$ TeV	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
7.	Search for supersymmetry in final states with a single electron or muon using angular correlations and heavy-object identification in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
8.	Highly-parallelized simulation of a pixelated LArTPC on a GPU	Abed Abud A. et al.	2023	Journal of Instrumentation	Scopus
9.	Publisher Correction: Observation of triple J/ψ meson production in proton-proton collisions (Nature Physics, (2023), 19, 3, (338-350), 10.1038/s41567-022-01838-y)	Tumasyan A. et al.	2023	Nature Physics	Scopus
10.	Measurements of the azimuthal anisotropy of prompt and nonprompt charmonia in PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
11.	Searches for additional Higgs bosons and for vector leptoquarks in $\tau\tau$ final states in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
12.	Search for long-lived particles using out-of-time trackless jets in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
13.	Search for the lepton-flavor violating decay of the Higgs boson and additional Higgs	Tumasyan A. et al.	2023	Physical Review D	Scopus

	bosons in the Formula Presented final state in proton-proton collisions at Formula Presented				
14.	A search for decays of the Higgs boson to invisible particles in events with a top-antitop quark pair or a vector boson in proton-proton collisions at $\sqrt{s}=13\text{TeV}$	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
15.	Observation of electroweak $W+W-$ pair production in association with two jets in proton-proton collisions at $s=13\text{TeV}$	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
16.	Search for CP violation in $t t^{-} H$ and tH production in multilepton channels in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
17.	Search for high-mass exclusive $\gamma\gamma \rightarrow WW$ and $\gamma\gamma \rightarrow ZZ$ production in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
18.	Performance of the local reconstruction algorithms for the CMS hadron calorimeter with Run 2 data	Tumasyan A. et al.	2023	Journal of Instrumentation	Scopus
19.	Strange hadron collectivity in pPb and PbPb collisions	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
20.	Observation of four top quark production in proton-proton collisions at $s=13\text{TeV}$	Hayrapetyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
21.	Latest results of Longevity studies on the present CMS RPC system for HL-LHC phase	Aly R. et al.	2023	Nuclear Instruments and Methods in Physics Research, Section A:	Scopus

				Accelerators, Spectrometers, Detectors and Associated Equipment	
22.	Observation of the Rare Decay of the η Meson to Four Muons	Hayrapetyan A. et al.	2023	Physical Review Letters	Scopus
23.	Performance of the CMS High Granularity Calorimeter prototype to charged pion beams of 20-300 GeV/c	Acar B. et al.	2023	Journal of Instrumentation	Scopus
24.	Aging studies for the CMS improved Resistive Plate Chambers	Filho M.B.F. et al.	2023	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment	Scopus
25.	Observation of τ Lepton Pair Production in Ultraperipheral Pb-Pb Collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
26.	Constraints on anomalous Higgs boson couplings to vector bosons and fermions from the production of Higgs bosons using the $\tau\tau$ final state	Tumasyan A. et al.	2023	Physical Review D	Scopus
27.	Search for pair-produced vector-like leptons in final states with third-generation leptons and at least three b quark jets in proton-proton collisions at $s=13\text{TeV}$	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
28.	Search for long-lived particles decaying to a pair of muons in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus

29.	CMS pythia 8 colour reconnection tunes based on underlying-event data	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
30.	Search for a vector-like quark $T' \rightarrow tH$ via the diphoton decay mode of the Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
31.	Search for a heavy composite Majorana neutrino in events with dilepton signatures from proton-proton collisions at $s=13$ TeV	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
32.	Search for light Higgs bosons from supersymmetric cascade decays in pp collisions at $\sqrt{s}=13$ TeV	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
33.	Reconstruction of interactions in the ProtoDUNE-SP detector with Pandora	Abud A.A. et al.	2023	European Physical Journal C	Scopus
34.	Azimuthal Correlations within Exclusive Dijets with Large Momentum Transfer in Photon-Lead Collisions	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
35.	Search for Higgs Boson and Observation of Z Boson through Their Decay into a Charm Quark-Antiquark Pair in Boosted Topologies in Proton-Proton Collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
36.	Search for the Higgs boson decay to a pair of electrons in proton-proton collisions at $s=13$ TeV	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
37.	Search for Higgs Boson Decay to a Charm Quark-Antiquark Pair in Proton-Proton Collisions at $\sqrt{s}=13$ TeV	Tumasyan A. et al.	2023	Physical review letters	Scopus

38.	Two-particle azimuthal correlations in γp interactions using pPb collisions at $\sqrt{s_{NN}}=8.16\text{TeV}$	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
39.	Proton reconstruction with the CMS-TOTEM Precision Proton Spectrometer	Tumasyan A. et al.	2023	Journal of Instrumentation	Scopus
40.	Measurement of the Higgs boson inclusive and differential fiducial production cross sections in the diphoton decay channel with pp collisions at $s = 13\text{ TeV}$	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
41.	Search for direct pair production of supersymmetric partners of τ leptons in the final state with two hadronically decaying τ leptons and missing transverse momentum in proton-proton collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review D	Scopus
42.	Search for resonant and nonresonant production of pairs of dijet resonances in proton-proton collisions at $s = 13\text{ TeV}$	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
43.	Search for new physics in multijet events with at least one photon and large missing transverse momentum in proton-proton collisions at 13 TeV	Hayrapetyan A. et al.	2023	Journal of High Energy Physics	Scopus
44.	Search for Higgs boson pairs decaying to WW^*WW^* , $WW^*\tau\tau$, and $\tau\tau\tau\tau$ in proton-proton collisions at $s = 13\text{ TeV}$	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
45.	Search for pair production of vector-like quarks in leptonic final states in proton-proton collisions at $s = 13\text{ TeV}$	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus

46.	Search for nonresonant Higgs boson pair production in final state with two bottom quarks and two tau leptons in proton-proton collisions at $s=13$ TeV	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
47.	Erratum: Measurement of prompt and nonprompt charmonium suppression in PbPb collisions at 5.02 TeV (The European Physical Journal C, (2018), 78, 6, (509), 10.1140/epjc/s10052-018-5950-6)	Sirunyan A.M. et al.	2023	European Physical Journal C	Scopus
48.	Measurement of the $B_s^0 \rightarrow \mu^+\mu^-$ decay properties and search for the $B_0 \rightarrow \mu^+\mu^-$ decay in proton-proton collisions at $s=13$ TeV	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
49.	In-beam test results of the Super-FRS GEM-TPC detector prototype with relativistic uranium ion beam	Luoma M. et al.	2023	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment	Scopus
50.	Identification and reconstruction of low-energy electrons in the ProtoDUNE-SP detector	Abud A.A. et al.	2023	Physical Review D	Scopus
51.	Measurement of the top quark pole mass using $t\bar{t} + \text{jet}$ events in the dilepton final state in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
52.	Search for new physics in the τ lepton plus missing transverse momentum final state in proton-proton collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus

53.	New slow control emulator for the CMS phase-2 upgrade RPC link system	Boghrati B. et al.	2023	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment	Scopus
54.	Machine Learning based tool for CMS RPC currents quality monitoring	Shumka E. et al.	2023	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment	Scopus
55.	Search for a massive scalar resonance decaying to a light scalar and a Higgs boson in the four b quarks final state with boosted topology	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
56.	Measurement of differential cross sections for the production of a Z boson in association with jets in proton-proton collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review D	Scopus
57.	Measurement of the mass dependence of the transverse momentum of lepton pairs in Drell-Yan production in proton-proton collisions at $\sqrt{s}=13\text{TeV}$	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
58.	Measurement of the electroweak production of Formula Presented in association with two jets in proton-proton collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review D	Scopus
59.	Measurements of inclusive and differential cross sections for the Higgs boson production	Hayrapetyan A. et al.	2023	Journal of High Energy Physics	Scopus

	and decay to four-leptons in proton-proton collisions at $s = 13$ TeV				
60.	Measurements of the Higgs boson production cross section and couplings in the W boson pair decay channel in proton-proton collisions at $\sqrt{s}=13$ TeV	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
61.	Search for electroweak production of charginos and neutralinos at $s=13$ TeV in final states containing hadronic decays of WW, WZ, or WH and missing transverse momentum	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
62.	Search for a high-mass dimuon resonance produced in association with b quark jets at $s = 13$ TeV	Hayrapetyan A. et al.	2023	Journal of High Energy Physics	Scopus
63.	Azimuthal correlations in Z +jets events in proton-proton collisions at $\sqrt{s}=13$ TeV	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
64.	Search for a charged Higgs boson decaying into a heavy neutral Higgs boson and a W boson in proton-proton collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
65.	Search for Higgs boson decays to a Z boson and a photon in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
66.	Measurement of the cross section of top quark-antiquark pair production in association with a W boson in proton-proton collisions at $s = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
67.	Author Correction: A portrait of the Higgs boson by the CMS experiment ten years after	Tumasyan A. et al.	2023	Nature	Scopus

	the discovery (Nature, (2022), 607, 7917, (60-68), 10.1038/s41586-022-04892-x)				
68.	Search for nonresonant Higgs boson pair production in the four leptons plus twob jets final state in proton-proton collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
69.	Measurement of the Dependence of the Hadron Production Fraction Ratios f_s/f_u and f_d/f_u on B Meson Kinematic Variables in Proton-Proton Collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
70.	Impact of cross-section uncertainties on supernova neutrino spectral parameter fitting in the Deep Underground Neutrino Experiment	Abed Abud A. et al.	2023	Physical Review D	Scopus
71.	Observation of Same-Sign WW Production from Double Parton Scattering in Proton-Proton Collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
72.	Search for Nonresonant Pair Production of Highly Energetic Higgs Bosons Decaying to Bottom Quarks	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
73.	Measurement of the differential $t\bar{t}$ production cross section as a function of the jet mass and extraction of the top quark mass in hadronic decays of boosted top quarks	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
74.	Precision measurement of the Z boson invisible width in pp collisions at $s=13$ TeV	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus

75.	RPC based tracking system at CERN GIF++ facility	Mota Amarilo K. et al.	2023	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment	Scopus
76.	Probing Small Bjorken-x Nuclear Gluonic Structure via Coherent J/ψ Photoproduction in Ultraperipheral Pb-Pb Collisions at $\sqrt{s_{NN}} = 5.02$ TeV	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
77.	Search for Exotic Higgs Boson Decays Formula Presented with Events Containing Two Merged Diphotons in Proton-Proton Collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
78.	Search for top squarks in the four-body decay mode with single lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
79.	Measurement of the $t\bar{t}$ charge asymmetry in events with highly Lorentz-boosted top quarks in pp collisions at $s=13$ TeV	Tumasyan A. et al.	2023	Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics	Scopus
80.	Search for heavy resonances and quantum black holes in $e\mu$, $e\tau$, and $\mu\tau$ final states in proton-proton collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
81.	Observation of triple J/ψ meson production in proton-proton collisions	Tumasyan A. et al.	2023	Nature Physics	Scopus
82.	A search for new physics in central exclusive production using the missing mass technique	Tumasyan A. et al.	2023	European Physical Journal C	Scopus

	with the CMS detector and the CMS-TOTEM precision proton spectrometer				
83.	First measurement of the forward rapidity gap distribution in Formula Presented collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review D	Scopus
84.	Search for CP violating top quark couplings in pp collisions at $\sqrt{s} = 13$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
85.	Probing Heavy Majorana Neutrinos and the Weinberg Operator through Vector Boson Fusion Processes in Proton-Proton Collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review Letters	Scopus
86.	Publisher Correction: Observation of triple J/ψ meson production in proton-proton collisions (Nature Physics, (2023), 19, 3, (338-350), 10.1038/s41567-022-01838-y)	Tumasyan A. et al.	2023	Nature Physics	Scopus
87.	Azimuthal anisotropy of dijet events in PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV	Tumasyan A. et al.	2023	Journal of High Energy Physics	Scopus
88.	Search for new physics using effective field theory in 13 TeV pp collision events that contain a top quark pair and a boosted Z or Higgs boson	Tumasyan A. et al.	2023	Physical Review D	Scopus
89.	Measurements of jet multiplicity and jet transverse momentum in multijet events in proton-proton collisions at $\sqrt{s}=13$ TeV	Tumasyan A. et al.	2023	European Physical Journal C	Scopus
90.	Search for narrow resonances in the Formula Presented-tagged dijet mass spectrum in proton-proton collisions at Formula Presented	Tumasyan A. et al.	2023	Physical Review D	Scopus

91.	RPC background studies at CMS experiment	Carnevali F. et al.	2023	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment	Scopus
92.	Generalizing Stratonovich–Weyl Axioms for Composite Systems	Khvedelidze A.	2023	Physics of Particles and Nuclei	Scopus