

Publication data

Published papers:	26 (+424 collaborational with many authors)
MTMT identifier:	10052243
INSPIREHEP identifier:	1419000
Scopus identifier:	57203423271
ORCID identifier:	0000-0003-2849-0120
Google Scholar identifier:	Hg-B5ulAAAAJ
Cumulative impact factor:	35.9
Independent citations (2026.03.27., excl. ALICE collaboration papers, MTMT):	154

Peer-reviewed, impact factor publications

1. L. Gyulai, **G. Bíró**, R. Vértesi, G.G. Barnaföldi, Effect of event classification on the Tsallis thermometer, Phys. Rev. D 113, 016021, arXiv:2601.04106, **IF: 5.3**
2. S. Caron, A. Ipp, G. Aarts, **G. Bíró**, et al. Strategic white paper on AI infrastructure for particle, nuclear, and astroparticle physics: insights from JENA and EuCAIF, Mach. Learn.: Sci. Technol. 7 013002, arXiv:2503.14192, **IF: 4.6**
3. **G. Bíró**, G. Papp, G.G. Barnaföldi, Estimating event-by-event multiplicity by a Machine Learning Method for Hadronization Studies, Int. J. Mod. Phys. A 40, 21 (2025) 2542011, arXiv:2408.17130, **IF: 1.2**
4. M. Aehle, **G. Bíró**, et al, Reconstruction of proton relative stopping power with a granular calorimeter detector model, Int. J. Mod. Phys. A 40, 21 (2025) 2542008, arXiv:2503.02788, **IF: 1.2**
5. L. Gyulai, **G. Bíró**, R. Vértesi, G.G. Barnaföldi, Evolution of the hot dense matter at LHC energies through light and heavy-flavor hadrons using non-extensive thermodynamics, Int. J. Mod. Phys. A 40, 21 (2025) 2444010 arXiv:2409.01085 , **IF: 1.2**
6. A. Schilling, **G. Bíró** et al, Modeling charge collection in silicon pixel detectors for proton therapy applications, Biomed. Phys. Eng. Express 11 035005 (2025), **IF: 1.6**
7. **G. Bíró**, Leonid Serkin, Guy Paic, G.G. Barnaföldi, Investigating the soft and hard limits in transverse momentum spectra in pp collisions, Eur. Phys. J. Spec. Top. (2025) arXiv:2403.07512, **IF: 2.6**
8. N. Ritjoho, **G. Bíró** et al, Development of the trigger-controlling system for the proton computed tomography prototype, Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment 1072 (2025) 170125, **IF: 1.4**
9. L. Gyulai, **G. Bíró**, R. Vértesi, G.G. Barnaföldi, How far can we see back in time in high-energy collisions using charm hadrons?, J. Phys. G: Nucl. Part. Phys. 51 085103 (2024) arXiv:2401.14282, **IF: 3.4**
10. **G. Bíró**, M. Pocsai, I.F. Barna, G.G. Barnaföldi, J.T. Moody, G. Demeter, Machine learning methods for Schlieren imaging of a plasma channel in tenuous atomic vapor, Optics & Laser Technology (2022), 159, 2023, 108948 arXiv:2205.12731, **IF: 4.939**
11. **G. Bíró**, G.G. Barnaföldi, T.S. Biró, Tsallis-thermometer: a QGP indicator for large and small collisional systems, J. Phys. G 47 (2020) 10, 105002, arXiv:2003.03278, **IF: 2.415**
12. **G. Bíró**, G.G. Barnaföldi, T.S. Biró, Multiplicity Dependence in the Non-Extensive Hadronization Model Calculated by the HIJING++ Framework, MDPI Universe 5 (2020) 6, 134, arXiv:1905.11272, **IF: 2.165**
13. J. L. Albacete et al. Predictions for Cold Nuclear Matter Effects in p+Pb Collisions at $\sqrt{s_{NN}} = 8.16$ TeV, Nucl.Phys. A972 18-85 (2018), arXiv:1707.09973, **IF: 1.463**
14. **G. Bíró**, G.G. Barnaföldi, T.S. Biró, K. Ürmössy, Á. Takács, Systematic Analysis of the Non-extensive Statistical Approach in High Energy Particle Collisions - Experiment vs. Theory, Entropy 19(3) (2017), 88, arXiv:1702.02842, **IF: 2.419**

Collaboration notes

1. ALICE Collaboration, The Wigner ALICE Analysis Facility, ALICE-PUBLIC-2021-007

Conference proceedings

1. G. Paic, L. Serkin, G.G. Barnaföldi, **G. Bíró**, Why Do We Need Detailed Analysis of Data to Understand the Mechanisms of pp Collisions at the LHC?, Acta Phys.Polon.Supp. 18 (2025) 6, 6-A15
2. **G. Bíró**, B. Tankó-Bartalis, G.G. Barnaföldi, Testing of KNO-scaling of charged hadron multiplicities within a Machine Learning based approach, PoS ICHEP2022 (2022) 1188, arXiv:2210.10548
3. **G. Bíró**, G.G. Barnaföldi, G. Papp, M. Gyulassy, P. Lévai, X. Wang, B. Zhang, Introducing HIJING++: the Heavy Ion Monte Carlo Generator for the High-Luminosity LHC Era, PoS HardProbes (2019) 045, arXiv:1901.04220
4. **G. Bíró**, G. Papp, G.G. Barnaföldi, D. Nagy, M. Gyulassy, P. Lévai, X. Wang, B. Zhang, HIJING++, a Heavy Ion Jet Interaction Generator for the High-luminosity Era of the LHC and Beyond, MDPI Proc. 10 (2019) no.1, 4, arXiv:1811.02131
5. G. Papp, G.G. Barnaföldi, **G. Bíró**, M. Gyulassy, Sz.M. Harangozó, G. Ma, P. Lévai, X. Wang, B. Zhang, First Results with HIJING++ on High-energy Heavy Ion Collisions, PoS High-pT (2018) 015, arXiv:1805.02635
6. **G. Bíró**, G.G. Barnaföldi, T.S. Biró, K.M. Shen. Mass hierarchy and energy scaling of the Tsallis–Pareto parameters in hadron productions at RHIC and LHC energies, EPJ Web Conf. 171, (2018) 14008, arXiv:1710.09062
7. G.G. Barnaföldi, **G. Bíró**, M. Gyulassy, Sz.M. Harangozó, P. Lévai, G. Ma, G. Papp X. Wang, B. Zhang, First Results with HIJING++ in High-Energy Heavy-Ion Collisions, Nucl. And Part. Phys. Proc. 289–290 (2017), 373–376, arXiv:1701.08496
8. **G. Bíró**, G.G. Barnaföldi, T.S. Biró, K. Ürmössy. Application of the Non-extensive Statistical Approach to High Energy Particle Collisions AIP Conf. Proc. 1853 (2017), 080001, arXiv:1608.01643
9. T.S. Biró, G.G. Barnaföldi, **G. Bíró**, K.M. Shen, Near and Far from Equilibrium Power-Law Statistics, J. Phys.: Conf. Ser. 779 (2016), 1, arXiv:1608.03705
10. G.G. Barnaföldi, K. Ürmössy, **G. Bíró**, A 'soft+hard' model for Pion, Kaon, and Proton Spectra and v2 measured in PbPb Collisions at $\sqrt{s} = 2.76$ ATeV, J. Phys.: Conf. Ser. 612 (2015), 012048, arXiv:1509.06195
11. **G. Bíró**, G.G. Barnaföldi, E. Futó, On the Way to Future's High Energy Particle Physics Transport Code, Proc. of the 12th CIIT 334-338 (2015), arXiv:1512.06637

Accepted, forthcoming publications

1. **G. Bíró**, G.G. Barnaföldi, Machine Learning based KNO-scaling of charged hadron multiplicities with Hijing++, arXiv:2303.05422 (J. Phys.: Conf. Ser.)
2. **G. Bíró**, G.G. Barnaföldi, Péter Lévai, Dedicated Analysis Facility for HEP Experiments, arXiv:2303.05296 (J. Phys.: Conf. Ser.)

Papers under review

1. **G. Bíró**, Á. Sudár, Zs. Jólesz, G. Papp, G.G. Barnaföldi, Proton Computed Tomography Based on Richardson-Lucy Algorithm, arXiv:2212.00126
2. **G. Bíró**, G. Paic, L. Serkin, G.G. Barnaföldi, Revisiting the soft-hard separation in the transverse momentum spectra of pp collisions, arXiv:2510.09692

Other

1. T. S. Biró, G. G. Barnaföldi, **G. Bíró**, Particles and Plasmas, EPJST Editorial