

Publications in Journals – 2021

1. J. Pradhan, A. Duttagupta, V. Smirnov, J. Debnath, S. Roy, N. Chaddha, M. K. Dey, A. Bandyopadhyay, “Median plane and beam diagnosis in the central region for compact superconducting cyclotron”, Nuclear Instruments and Methods in Physics Research Section A 993 (2021) 165084
2. S. Mallik and F. Gulminelli, “Statistical treatment of nuclear clusters in the continuum”, Physical Review C 103 (2021) 015803
3. ALICE Collaboration, “Transverse-momentum and event-shape dependence of D-meson flow harmonics in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV”, Physics Letters B 813 (2021) 136054
4. Rupa Chatterjee, “Anisotropic flow of photons in relativistic heavy ion collisions”, Pramana 95 (2021) 15
5. ALICE Collaboration, “Centrality dependence of J/ψ and $\psi(2S)$ production and nuclear modification in p-Pb collisions at $\sqrt{s_{NN}} = 8.16$ TeV”, Journal of High Energy Physics 2021 (2021) 2
6. Sangeeta Das, Anik Adhikari, S.S.Alam, Sathi Sharma, Suman Aich, Arkabrata Gupta, Y. Sapkota, Ananya Das, A. Saha, S. K. Dey, Dibyadyuti Pramanik, Abhijit Bisoi, Indrani Ray, T.Bhattacharjee, C. C. Dey, S. Sarkar, M. Saha Sarkar, “Decay Spectroscopy of $^{117,118}\text{Sn}$ ”, Nuclear Physics A 1006 (2021) 122079
7. Pratap Roy, S. Mukhopadhyay, Mamta Aggarwal, Deepak Pandit, T. K. Rana, Samir Kundu, T. K. Ghosh, K. Banerjee, G. Mukherjee, S. Manna, A. Sen, R. Pandey, Debasish Mondal, S. Pal, D. Paul, K. Atreya and C. Bhattacharya, “Excitation energy and angular momentum dependence of the nuclear level density parameter around $A \approx 110$ ”, Physical Review C 103 (2021) 024602

8. Pratap Roy, K. Banerjee, T. K. Rana, S. Kundu, Deepak Pandit, N. Quang Hung, T. K. Ghosh, S. Mukhopadhyay, D. Mondal, G. Mukherjee, S. Manna, A. Sen, S. Pal, R. Pandey, D. Paul, K. Atreya & C. Bhattacharya, “Nuclear level density and thermal properties of ^{115}Sn from neutron evaporation”, *The European Physical Journal A* 57 (2021) 48
9. Deepak Pandit, Balaram Dey, Srijit Bhattacharya, T.K. Rana, Debasish Mondal, S. Mukhopadhyay, Surajit Pal, A. De, Pratap Roy, K. Banerjee, Samir Kundu, A. K. Sikdar, C. Bhattacharya, S.R. Banerje, “Puzzle of collective enhancement in the nuclear level density”, *Physics Letters B* 816 (2021) 136173
10. STAR Collaboration, “Flow and interferometry results from Au + Au collisions at $\sqrt{s_{\text{NN}}} = 4.5$ GeV”, *Physical Review C* 103 (2021) 034908
11. Jagannath Datta, Chiranjib Majumder, “Stabilizing Co, Ni and Cu on the h-BN surface: Using O-O bond activation to probe their performance as single atom catalyst”, *Catalysis Today* 370 (2021) 75-82
12. Neeraj Kumar, Shashi Verma, Shabnam Mohsina, Jhilam Sadhukhan, K Rojeeta Devi, A Banerjee, N Saneesh, M Kumar, Ruchi Mahajan, Meenu Thakur, Gurpreet Kaur, Anjali Rani, Abhishek Yadav, Rakesh Kumar, S Mandal, Suresh Kumar, B R Behera, K S Golda, A Jhingan, P Sugathan, “Probing entrance channel effects in fusion-fission dynamics through neutron multiplicity measurement of ^{208}Rn ”, *Physics Letters B* 814 (2021) 136062
13. Pingal Dasgupta, Guo-Liang Ma, Rupa Chatterjee, Li Yan, Song Zhang, and Yu-Gang Ma, “Thermal photons as a sensitive probe of α -cluster in C+Au collisions at the BNL Relativistic Heavy Ion Collider”, *The European Physical Journal A* 57 (2021) 134
14. S. Gupta, Jajati K. Nayak and Sushant K. Singh, “Chiral symmetry breaking and chemical equilibrium in heavy-ion collisions”, *Physical Review D* 103 (2021) 54023
15. S. Dalal, P. Bhaskar, K. Banerjee, S.A. Khan and C. Bhattacharya, “Design and development of a low cost Arduino controlled Ethernet interfaced Majority Logic Unit”, *Journal of Instrumentation* 16 (2021) P01008

16. Srijit Bhattacharya, Deepak Pandit, Balaram Dey, Debasish Mondal, S. Mukhopadhyay, Surajit Pal, A. De and S. R. Banerjee, "Effect of high angular momentum on η/s of nuclear matter", *Physical Review C* 103 (2021) 14305
17. E. H. Wang, J. H. Hamilton, A. V. Ramayya, C. J. Zachary, A. Lemasson, A. Navin, M. Rejmund, S. Bhattacharyya, Q. B. Chen, S. Q. Zhang, J. M. Eldridge, J. K. Hwang, N. T. Brewer, Y. X. Luo, J. O. Rasmussen, S. J. Zhu, G. M. Ter-Akopian, Yu. Ts. ganessian, M. Caamaño, E. Clément, O. Delaune, F. Farget, G. de France, and B. Jacquot, "Pseudospin-doublet bands and Gallagher Moszkowski doublet bands in $100Y$ ", *Physical Review C* 103 (2021) 34301
18. A. Kundu, Md. S. R. Laskar, R. Palit, R. Raut, S. Santra, N. Shimizu, T. Togashi, E. Ideguchi, H. Pai, S. Ali, F. S. Babra, R. Banik, Soumik Bhattacharya, S. Biswas, Biswajit Das, P. Dey, R. Donthi, A. Goswami, S. Jadhav, G. Mukherjee, B. S. Naidu, S. Rajbanshi, L. P. Singh, H. P. Sharma, S. S. Tiwary, and A. T. Vazhappilly, "New lifetime measurement for the $2+1$ level in $112Sn$ by the Doppler-shift attenuation method", *Physical Review C* 103 (2021) 34315
19. T. K. Rana, Samir Kundu, C. Bhattacharya, S. Manna, Pratap Roy, R. Pandey, Arijit Sen, T. K. Ghosh, G. Mukherjee, K. Banerjee, S. Mukhopadhyaya, Dipen Pal, Moin Shaikh, S. Nandi, Vishal Srivastava, J. K. Sahoo, J. K. Meena, A. K. Saha, R. M. Saha, Somnath Dalal, and S. Bhattacharya, "Complex fragment emission in dissipative binary decay of $74,76Kr^*$ ", *Physical Review C* 103 (2021) 34614
20. S. Moshat, H. Luitel and D. Sanyal, "Half-metallic ferromagnetism in molybdenum doped methylammonium lead halides ($MAPbX_3$, $X = Cl, Br, I$) system: First-principles study", *Journal of Magnetism and Magnetic Materials* 519 (2021) 167463
21. K. Bukharia, P. Karmakar, P. Pandit and A. Gupta, "Study of magnetic nanowires of amorphous $Co_{20}Fe_{60}B_{20}$ prepared by oblique angle deposition on nanorippled substrate", *Journal of Magnetism and Magnetic Materials* 529 (2021) 16784
22. Prasanta Karmakar, "Nano pyramid array on Si by concurrent growth of parallel and perpendicular spatial wave and local angle-dependent sputtering", *Applied Surface Science* 552 (2021) 149517

23. Sumit kumar Saha, Debojit Sarkar, Subhasis Chattopadhyay, Ashik Ikbal Sheikh and Siddharth Kumar Prasad, “Study of medium modified jet shape observables in Pb-Pb collisions at $\sqrt{s_{NN}}= 2.76\text{TeV}$ using EPOS and JEWEL event generators”, Nuclear Physics A 1006 (2021) 122064
24. Shreyasi Acharya and Subhasis Chattopadhyay, “Estimation of initial-state structures in high-energy heavy-ion collisions using principal component analysis”, Physical Review C 103 (2021) 34909
25. Shuaib Ahmad Khan, Jubin Mitra and Tapan K. Nayak, “Development of FPGA based phase alignment logic for the high speed protocol in HEP Experiments”, Computer Physics Communications 259 (2021) 07649
26. ALICE Collaboration, “First measurement of quarkonium polarization in nuclear collisions at the LHC”, Physics Letters B 815 (2021) 136146
27. ALICE Collaboration, “Production of light-flavor hadrons in pp collisions at $\sqrt{s}= 7$ and $\sqrt{s}= 13$ TeV”, The European Physical Journal C 81 (2021) 256
28. STAR Collaboration, “Measurements of W and Z/gamma* cross sections and cross-section ratios in p+p collisions at RHIC”, Physical Review D 103 (2021) 12001
29. STAR Collaboration, “Measurements of Dihadron Correlations Relative to the Event Plane in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV”, Chinese Physics C 45 (2021) 44002
30. STAR Collaboration, “Nonmonotonic Energy Dependence of Net-Proton Number Fluctuations”, Physical Review Letters 126 (2021) 92031
31. Snigdha Ghosh, Nilanjan Chaudhuri, Pradip Roy, Sourav Sarkar, “Thermomagnetic modification of the anomalous magnetic moment of quarks using the NJL model”, Physical Review D 103 (2021) 116008
32. Nilanjan Chaudhuri, Snigdha Ghosh, Sourav Sarkar, Pradip Roy, “Dilepton production from magnetized quark matter with an anomalous magnetic moment of the quarks using a three-flavor PNJL model”, Physical Review D 103 (2021) 96021
33. Suman Deb, Golam Sarwar, Raghunath Sahoo, Jan-e Alam, “Study of QCD dynamics using small systems”, The European Physical Journal A 57 (2021) 195

34. R. Mondal Saha, K. Banerjee, S. Manna, S. Kundu, T. K. Rana, N. Gayathri, G. Mukherjee, P. Karmakar, T. K. Ghosh, P. Roy, R. Pandey, A. Sen, A. Saha, C. Bhattacharya, “Development and characterization of polyethylene and deuterated polyethylene targets for nuclear physics experiments”, *Journal of Instrumentation* 16 (2021) T07002
35. ALICE Collaboration, “First measurement of the $|t|$ -dependence of coherent J/ψ photonuclear production”, *Physics Letters B* 817 (2021) 136280
36. ALICE Collaboration, “Elliptic Flow of Electrons from Beauty-Hadron Decays in Pb-Pb Collisions at $\sqrt{s_{NN}}=5.02$ TeV”, *Physical Review Letters* 126 (2021) 162001
37. STAR Collaboration, “Global polarization of Xi and Omega hyperons in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV”, *Physical Review Letters* 126 (2021) 162301
38. STAR Collaboration, “Comparison of transverse single-spin asymmetries for forward π^0 production in polarized pp, p Al and pAu collisions at nucleon pair c.m. energy $\sqrt{s_{NN}}=200$ GeV” *Physical Review D* 103 (2021) 72005
39. ALICE Collaboration, “Measurement of beauty and charm production in pp collisions at $\sqrt{s}=5.02$ TeV via non-prompt and prompt D mesons”, *Journal of High Energy Physics* 5 (2021) 220
40. ALICE Collaboration, “Measurements of mixed harmonic cumulants in Pb-Pb collisions at $\sqrt{s_{NN}}= 5.02$ TeV”, *Physics Letters B* 818 (2021) 136354
41. ALICE Collaboration, “AK femtoscopy in Pb-Pb collisions at $\sqrt{s_{NN}}= 2.76$ TeV”, *Physical Review C* 103 (2021) 55201
42. STAR Collaboration, “Longitudinal double-spin asymmetry for inclusive jet and dijet production in polarized proton collisions at $\sqrt{s_{NN}}= 200$ GeV”, *Physical Review D* 103 (2021) L091103
43. STAR Collaboration, “Methods for a blind analysis of isobar data collected by the STAR collaboration”, *Nuclear Science and Techniques* 32 (2021) 48
44. STAR Collaboration, “Measurement of transverse single-spin asymmetries of π^0 and electromagnetic jets at forward rapidity in 200 and 500 GeV transversely polarized proton-proton collisions”, *Physical Review D* 103 (2021) 92009

45. ALICE Collaboration, “Inclusive heavy-flavour production at central and forward rapidity in Xe-Xe collisions at $\sqrt{s_{NN}}= 5.44\text{TeV}$ ”, Physics Letters B 819 (2021) 136637
46. ALICE Collaboration, “Long- and short-range correlations and their event-scale dependence in high-multiplicity pp collisions at $\sqrt{s_{NN}}=13\text{ TeV}$ ”, Journal of High Energy Physics 5 (2021) 290
47. STAR Collaboration, “Azimuthal anisotropy measurements of strange and multistrange hadrons in U+U collisions at $\sqrt{s_{NN}}=193\text{ GeV}$ at the BNL Relativistic Heavy Ion Collider”, Physical Review C 103 (2021) 64907
48. ALICE Collaboration, “First measurement of coherent ρ^0 photoproduction in ultra-peripheral Xe-Xe collisions at $\sqrt{s_{NN}}= 5.44\text{TeV}$ ”, Physics Letters B 820 (2021) 136481
49. ALICE Collaboration, “Production of pions, kaons, (anti-)protons and ϕ mesons in Xe-Xe collisions at $\sqrt{s_{NN}}= 5.44\text{TeV}$ ”, The European Physical Journal C 81 (2021) 584
50. STAR Collaboration, “Measurement of $e+e$ -Momentum and Angular Distributions from Linearly Polarized Photon Collisions”, Physical Review Letters 127 (2021) 52302
51. Argha Dutta, Apu Sarkar, P.Mukherjee, N.Gayathri, Santu Dey, S.Neogy, Archana Sagdeo, “Influence of proton irradiation on the microstructure and mechanical properties of Nb-1Zr-0.1C alloy”, Journal of Nuclear Materials 557 (2021) 153221
52. S. Thakur, S. K. Saha, P. Dasgupta, R. Chatterjee and S. Chattopadhyay, “ p_T dependence of the correlation between initial spatial anisotropy and final momentum anisotropies in relativistic heavy ion collisions”, Nuclear Physics A 1014 (2021) 122263
53. M. Colonna, Y. X. Zhang, Y. J. Wang, D. Cozma, P. Danielewicz, C. M. Ko, A. Ono, M. B. Tsang, R. Wang, H. Wolter, J. Xu, Z. Zhang, L. W. Chen, H. G. Cheng, H. Elfner, Z. Q. Feng, M. Kim, Y. Kim, S. Jeon, C. H. Lee, B. A. Li, Q. F. Li, Z. X. Li, S. Mallik, D. Oliinychenko, J. Su, T. Song, A. Sorensen, and F.S. Zhang, “Comparison of heavy-ion transport simulations: Mean-field dynamics in a box”, Physical Review C 104 (2021) 24603