Dr. Ajay Kumar Tyagi, Associate Professor
Department of Physics, Banaras Hindu University (BHU), Varanasi
Adjunct faculty, Forensic Science Department, BHU, Varanasi

+91-9532098800 | +91-5422369101 | ajaytyagi@bhu.ac.in
https://new.bhu.ac.in/Site/FacultyProfile/1_158?FA000659
https://orcid.org/0000-0002-6864-2507
https://scholar.google.co.in/citations?user=eaMBQ1YAAAAJ&hl=en
https://www.researchgate.net/profile/Ajay_Kumar173

Research Projects as a PI (Ongoing):

1. Study of Heavy Ion reaction dynamics, IUAC-UGC.
2. Study of neutron cross section measurement and Resonance observations in case of Sodium and Iron, Department of Atomic Energy, Govt. of India.
3. Indo-Russian joint research award by DST, Govt. of India and RFBR, Russia
4. Study of surrogate reaction mechanism, IUAC-UGC.
5. Validation of surrogate reaction technique for measuring (n,p) reaction cross sections and measurement for ^{51}Cr(n,p) cross sections, UGC-DAE CSR, Kolkata.
6. Surrogate Ratio Method: A fascinating tool to measure the nuclear reaction cross sections, DST-SERB.
7. SPARC grant with China, from MHRD, Govt of India.

Awards & Fellowships:

1. Junior Research Fellow (UGC), Dec. 1999 - Feb. 2002.
2. Senior Research Fellow (CSIR), March 2002 - July 2005.
3. Young Scientist Travel grant award by GSI, Germany to present paper in V Nuclear Physics Symposium 2003, France.
4. Best poster award in 91st Indian Science Congress 2004, Chandigarh, India.
5. Research Scientist, Cyclotron Institute, Texas A&M University, USA, 2008.
6. Postdoctoral Fellow, University of Kentucky, Lexington, USA, 2010-2012.
7. Fast Track Young Scientist Award in Physical Science, DST, Govt. of India, 2012.
8. BHU Vice Chancellor's Excellence Award in Research with One lakh cash and Citation, March 2014.
9. INSA bilateral exchange award for visiting Taiwan, February 2019.
10. International partner, TANGRA project, JINR, Dubna, Russia.

Facility used and expertise:

- 7 MV VdG Accelerator, Kentucky University, USA.
- 14 UD Pelletron Accelerator, IUAC, New Delhi, INDIA.
- Cyclotron, Chandigarh, INDIA.
- HIGS at TUNL, Durham, North Carolina, USA.

- Super conducting Cyclotron, TAMU, College Station, USA.
- Tagged Neutron Facility, JINR, Dubna, Russia.
- Hands on experience in nuclear electronics, Detectors, Such as HPGe, Silicon.
- Expertise in particle spectroscopy, N-TOF setup and accelerator physics.

Invited Talks:

1. Recent Scientific and Technological advances in Physical Science, December 29, 2008-January 02, 2009, SVNIT, Surat.
2. National Workshop on Neutron Generator and Applications, September 2009, BHU, Varanasi.
3. International Symposium on Exotic Nuclei "EXON - 2009" Sochi, 28 September - 02 October 2009, Sochi, Russia.
4. Fourteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, August 28 - September 2, 2011, University of Guelph, Canada.
5. APS Fall meeting, 2011, Michigan State University, USA.
6. International Theme meeting on EXFOR Compilation of nuclear data, February 18-22, 2013, BHU, Varanasi.
7. Two Days National Workshop cum Theme Meeting on Ion Beam Induced Material Modifications & Neutron Generation using 3 MV Particle Accelerator: Applications in Physical, Chemical and Life Sciences" August 19-20, 2013, GGU, Bilaspur.
8. International Symposium on Entrance Channel Effect on the Reaction Mechanism in Heavy Ion Collisions, November 6-8, 2013, Messina, Italy.
9. Winter School on "Accelerator, Nuclear and Particle Physics" March 29-April 04, 2014, BHU, Varanasi.
10. Ion beam applications around Banaras using PIXE and PIGE, 2nd International Notre Dame Europe Symposium on Nuclear Science and Society to be held at Notre Dame Rome Center, Rome, Italy, November 05, 2015.
11. Neutron: A fantastic tool to study the nucleus, TANGRA collaboration meeting, JINR, Dubna, Russia, December 09, 2016.
12. Sources of errors in neutron scattering measurements, Error propagation in nuclear reaction data measurement-2017: A two days National workshop, March 13, 2017, Mizoram University, Aizwal.
13. Neutron Measurements at BARC, DUBNA and Kentucky facilities, International Conference in Nuclear Physics with Energetic Heavy Ion Beams (ICNP 2017), Panjab University, Chandigarh, March 18, 2017.
14. N for Naughty N for Neutron, National Conference on Nuclear and Accelerator Physics (NCNAP-2016) Central University of Jharkhand, Brambe, Ranchi, October 05, 2016.
15. Study of Neutron Scattering through Time of Flight Technique, National Conference on Recent Trends in Nuclear Physics, February 15-16, 2016, at AMU, Aligarh.
16. Neutron Time of Flight Technique and Shielding Importance, Workshop on Light from Dark side of The Universe, March 17-20, 2015, BHU, Varanasi.

17. Study of Elastic and Inelastic Neutron Cross sections using Time of Flight Technique, 5th AASPP Workshop on Asian Nuclear Reaction Database Development September, 22-24, 2014. BARC, Mumbai.
18. Fast Neutrons as a probe for Nuclear Reaction Studies and Cross Section Measurements, International Conference on High Energy Radiation and Applications (ICHERA-2017), October 10-13, 2017 in the Department of Physics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara, India.
19. Present status of Particle accelerators in India, AICTE sponsored Staff Development Programme (SDP) on "Advances in Condensed matter Physics, NIT, Surat, September 04, 2009.
20. Particle accelerator and role of BHU, UGC DAE, Kolkata Centre, May 17, 2017.
21. Beauty of TAGGED Neutron measurements, New Horizons in Heavy-ion induced Fission and Nuclear Data Applications (NHHF&NDA), DAE-BRNS Theme Meeting, BARC, Mumbai, June 22-24, 2018.
22. National seminar on Nuclear and High energy Physics, March 30-31, 2018 Gauhati University.
23. International conference of Nuclear Physics, Visva Bharati, Shantiniketan, February 03-05, 2019.
24. Neutron: A versatile tool for nuclear reaction studies, Institute of Physics, Academia Sinica, Taiwan, December 25, 2019.
25. Centenary Celebration Conference on Nuclear Structure and Nuclear Reactions, March 03, 2020, Department of Physics, Aligarh Muslim University.
26. Nuclear reaction dynamics, Summer School on Nuclear and Particle Physics, September 23-October 12, 2015, BHU, Varanasi.
27. BHU Accelerator project and Physics with neutron beam, National School cum Workshop inn Accelerator Physics, March 15-18, 2016, Panjab University, Chandigarh.
28. Nuclear reactions, UGC Workshop on Physics of particles, Nuclei and related instrumentation, January 27-31, 2015, BHU, Varanasi.

Symposium/Workshop/Conference organized:

1. Co-Convener, National Workshop on Neutron Generator and Applications, September 2009.
2. Convener, International Theme meeting on EXFOR Compilation of nuclear data, February 18-22, 2013.
3. Dy-Director, Winter School on "Accelerator, Nuclear and Particle Physics", March 29-April 04, 2014.
4. Secretary, DAE-BRNS Nuclear Physics Symposium, December 08-12, 2014.
5. Co-Convener, Nuclear Physics School under UGC Networking Programme, February 2015.
6. Convener, One day Conference, Physics Department, February 2016, BHU, Varanasi.
7. Co-convener, winter school on beyond the standard model physics, January 24, 2016 to February 14, 2016.
8. Convener, International Conference on New frontiers in Nuclear Physics, October 14-17, 2019, BHU, Varanasi.

Membership of Scientific organizations:

1. Member, American Physical Society.
2. Life member, Indian Society for Particle Accelerators Society.
3. Life member, Indian Physics Association.

Administrative Positions:

1. Warden, Broacha Hostel, July 06, 2012 to July 04, 2018.
2. Member, Under Graduate Admission Coordination Committee (UACC), BHU.
3. Member, Post Graduate Admission Coordination Committee (PACC), Physics
4. Department, BHU.
5. Member, IQAC, Institute of Science, BHU, Varanasi
6. Member, Organizing Committee of Aakanksha, Cultural festival of Institute of Science, BHU, Varanasi.
7. Member, Time table Committee, Physics Department, BHU, Varanasi

Journal Reviewer: Phys. Rev. C, Phys. Rev. Lett and Indian Journal of Physics.

Policy report: Existing and upcoming particle accelerators in India, B. Lalremruata, S. Kailas, V.N. Bhoraskar, S. Ganesan, Alok Saxena, B.K. Nayak, Ajay Kumar, M.M. Musthafa, S. Mukherjee, G. Mukherjee, H. Naik, S.D. Dhole , Published by International Atomic Energy Agency (IAEA), Vienna, INDC(IND)-0050 Distr. G, 2017.

List of publications in referred journals:

1. Dynamical effects in the decay of a compound nucleus; I.M. Govil, R. Singh, A. Kumar, Ajay Kumar, G. Singh, S.K. Kataria and S.K. Datta, Phys. Rev. C 62, 064606 (2000).
2. Search for entrance channel effects in heavy ion induced fusion reactions through the compound system $^{79}Rb^{*}$ J. Kaur, I. M. Govil, G. Singh, Ajay Kumar, A. Kumar, B. R. Behera, and S. K. Datta Phys. Rev. C 66 034601 (2002).
3. Search for entrance channel effects in the heavy ion induced fusion reactions via neutron evaporation, Ajay Kumar, A. Kumar, G. Singh, B.K. Yogi, Rakesh Kumar, S.K. Datta, M.B. Chatterjee and I.M. Govil, Phys. Rev. C 68, 034603(2003).
4. Neutron evaporation as a probe for dynamical effects in heavy ion fusion Reactions, Ajay Kumar, A. Kumar, Hardev Singh, R.P. Singh, K.S. Golda, S. K. Datta and I.M. Govil, V Nuclear Physics Symposium, 2003, Tours, France, AIP Conference Proceedings 704 (501) (2004).
5. Anomalous behavior of the level density parameter in neutron and charged particle evaporation, Ajay Kumar, A. Kumar, G. Singh, Hardev Singh, R.P. Singh, Rakesh Kumar, K.S. Golda, S.K. Datta and I.M. Govil, Phys. Rev. C 70, 044607 (2004).
6. Dynamical effects in the heavy ion fusion reactions of the compound nucleus $^{80}Sr^{*}$ via charged particle evaporation; J. Kaur, Ajay Kumar, A. Kumar, G. Singh, S.K. Datta and I.M. Govil, Phys. Rev. C 70, 017601, (2004).

7. Entrance channel effects in fission of ^{197}Tl, Hardev Singh, Ajay Kumar, G. Singh, Bivash R. Behera, I. M. Govil, Golda K.S., Pankaj Kumar, Akhil Jhingan, R. P. Singh, P. Sugathan, M. B.Chatterjee, S. K. Datta, Ranjeet, Santanu Pal, and G. Viesti, Phys. Rev. C 76, 044610, (2007).
8. Pre compound neutron evaporation in low energy heavy ion fusion reactions, Ajay Kumar, G. Singh, Hardev Singh, Rajesh Kumar, B.K. Yogi, R.P. Singh, Rakesh Kumar, K.S. Golda, S.K. Datta and I.M. Govil, Nucl. Phys. A 798 (1-15), (2008).
9. Role of nuclear dissipation and entrance channel mass asymmetry in pre-scission neutron multiplicity enhancement in fusion-fission reactions; Hardev Singh, Golda K.S, Santanu Pal, Ranjeet,Rohit Sandal, Bivash R. Behera, Gulzar Singh, Akhil Jhingan, R. P. Singh, P. Sugathan, M. B.Chatterjee, S. K. Datta, Ajay Kumar, G. Viesti and I. M. Govil, Phys. Rev. C 78, 024609, (2008).
10. Level density parameter-A tool to investigate nuclear reaction dynamics, Ajay Kumar, Hardev Singh, G. Singh, K.S. Golda, R.P. Singh and I. M. Govil, AIP Conf. Proc. 1224, 14 (2010).
11. Collective Structure in ^{94}Zr and Subshell Effects in Shape Coexistence, A. Chakraborty, C. Andreoiu, P. Bender, B. P. Crider, D. Cross, G. Demand, A.B. Garnsworthy, P. E. Garrett, G. Hackman, B. Hadinia, S. Ketelhut, Ajay Kumar, K. Leach, M. T. McEllistrem, E.E. Peters, J. Pore,F. M. Prados-Estvez, E. Rand, B. Singh, E. Tardiff, Z. Wang, J. L. Wood, S. W. Yates, Physical Rev. Letter 110, 022504, (2013).
12. Spin and parity assignments of $\pi h_{11/2}$ band in ^{127}I, S. Chakraborty, H. P. Sharma, P. Banerjee, S. Ganguly, A. Kumar, N. Kaur, S. Kumar, S. Muralithar, R.P. Singh, L. Chaturvedi, A. Kumar, A. K. Jain, and S. Laxhminarayan, AIP Conf. Proc. 1524, 117 (2013).
13. Study of Nuclear Reaction Dynamics through Particle Evaporation, Ajay Kumar, A. Kumar, G. Singh, Hardev Singh, R. P. Singh, Rakesh Kumar, K. S. Golda and I. M. Govil, International conference recent trends in nuclear physics, November 19-21,2012, India, AIP Conf. Proc. 1524, 292 (2013).
14. Elastic and inelastic neutron scattering cross sections for fission reactor applications, Hicks, S. F.; Chakraborty, A.; Combs, B.; Crider, B. P.; Downes, L.; Girgis, J.; Kersting, L. J.; Kumar, A.; Lueck, C. J.; McDonough, P. J.; McEllistrem, M. T.; Peters, E. E.; Prados-Estevz, F. M.; Schniederjan, J.; Sidwell, L.; Sigillito, J.; Vanhoy, J. R.; Watts, D.; Yates, S. W., AIP Conference Proceedings; 1525, 276 (2013).
15. Study of angular momentum variation due to entrance channel effect in heavy ion fusion Reactions, Ajay Kumar, Journal of Physics 515, 012011 (2014).
16. Differential cross section for neutron elastic and inelastic scattering on ^{23}Na, J.R. Vanhoy, Ajay Kumar et al, EPJ Conf 66, 03091 (2014).
17. A study of measured neutron elastic differential neutron cross sections for ^{23}Na, Ajay Kumar et al, Journal of Radioanal Nucl Chem 302: 1043-47 (2014).
18. Systematic study of iodine nuclei in A$\sim$125 mass region, S. Chakraborty, H. P. Sharma, P. Banerjee, S. Ganguly, A. Kumar, N. Kaur, S. Kumar, S. Muralithar, R. P. Singh, L. Chaturvedi, A. Kumar, A. K. Jain, AIP Conference Proceedings 1609, 43 (2014).

19. Study of angular momentum hindrance in heavy ion fusion reactions, Ajay Kumar et al., EPJ web 86, 00019 (2015).
20. Neutron Scattering Differential Cross Sections for ^{23}Na from 1.5 to 4.5 MeV, J.R. Vanhoy, S.F. Hicks, Ajay Kumar et al., Nuclear Physics A 939 (2015) 121-140.
21. Inelastic neutron scattering studies of ^{132,134}Xe: Elucidating structure in a transitional region and possible interferences for 0νββ searches, E.E. Peters, T.J. Ross, A. Chakraborty, B.P. Crider, A. Kumar, M.T. McEllistrem, F.M. Prados-Estévez, and S.W. Yates, EPJ Web 93, 01027 (2015).
22. No-Spin States and Low-Lying Structures in ^{130}Xe and ^{136}Xe, T.J. Ross, E.E. Peters, A. Chakraborty, B.P. Crider, A. Kumar, S.H. Liu, M.T. McEllistrem, F.M. Prados- Estévez, J.R. Vanhoy, and S.W. Yates, EPJ Web 93, 01010 (2015).
23. Level lifetimes and the structure of ^{134}Xe from inelastic neutron scattering, E. E. Peters, A. Chakraborty, B. P. Crider, S. F. Ashley, E. Elhami, S. F. Hicks, A. Kumar, M. T. McEllistrem, S. Mukhopadhyay, J. N. Orce, F. M. Prados-Estévez, and S.W. Yates, Phys. Rev. C 96, 014313 (2017).
24. Nuclear structure of ^{76}Ge from inelastic neutron scattering measurements and shell model calculations, S. Mukhopadhyay, B. P. Crider, B. A. Brown, S. F. Ashley, A. Chakraborty, A. Kumar, M. T. McEllistrem, E. E. Peters, F. M. Prados-Estévez, and S. W. Yates, Phys. Rev. C 95, 014327 (2017).
25. Studying of 14.1 MeV neutrons inelastic scattering on light nuclei, N.A. Fedorov, T.Y. Tretyakova, D.N. Grozdanov, V.M. Bystritskiy, Y.N. Kopatch, I.N. Ruskov, V.R. Skoy, N.I. Zamyatin, D. Wang, F.A. Aliev, C. Hramco, A. Gandhi, A. Kumar, M.G. Sapozhnikov, Y.N. Rogov, E.A. Razinkov and S.Dabylova, Memoirs of the Faculty of Physics, 2, (2018).
26. Re-measurement of reduced transition probabilities in ^{132}Ba*, S. Dutt , M. Saxena, R. Kumar, A. Jhingan, A. Agarwal, A. Banerjee, R.K. Bhowmik, C. Joshi, J. Kaur, Kumar, M. Matejska-Minda, V. Mishra, I.A. Rizvi, A. Stolarz, H.J. Wollersheim and P.J. Napiorkowski, Acta Physica Polonica B, No. 3, 535, Vol.49, (2018).
27. Negative parity three-quasiparticle band in ^{127}I, S. Chakraborty, H. P. Sharma, S. S. Tiwary, C. Majumder, P. Banerjee, S. Ganguly, S. Kumar, A. Kumar, A. Kumar, R. P. Singh and S. Muralithar, Eur. Phys. Journal. A 54: 112 (2018).
28. Measurements of the gamma-quanta angular distributions emitted from neutron inelastic scattering on ^{28}Si, N.A. Fedorov, D.N. Grozdanov, V.M. Bystritskiy, Yu.N. Kopach, I.N. Ruskov, V.R. Skoy, T.Yu. Tretyakova, N.I. Zamyatin, D. Wang, F.A. Aliev, C. Hramco, A. Gandhi, A. Kumar, S. Dabylova, E.P. Bogolubov and Yu.N. Barmakov, EPJ web conferences, 177, P02002, (2018).
29. Seniority structure of $^{136}Xe_{82}$ from inelastic neutron scattering, E. E. Peters, P. Van Isacker, A. Chakraborty, B. P. Crider, A. Kumar, S.H. Liu, M. T. McEllistrem, C.V. Mehl, F. M. Prados-Estévez, T.J. Ross, J.L. Wood and S.W. Yates, Phys. Rev. C 98, 034302 (2018).
30. Effect of energy variation on the dissipative evolution of the system in heavy-ion fusion reactions, N.K. Rai , Vivek Mishra , and Ajay Kumar, Phys. Rev. C 98, 024626 (2018).

31. K and L- shell X-ray Transition-Probability Ratios by Proton Bombardment, P.K. Prajapati and Ajay Kumar, International Journal of Scientific Research in Physics and Applied Sciences Vol.6, Issue.4, pp.10-65, August (2018).
32. Measurement of Angular Distributions of Gamma Rays from the Inelastic Scattering of 14.1-MeV Neutrons by Carbon and Oxygen Nuclei, D.N. Grozdanov, N.A. Fedorov, V.M. Bystritski, Yu.N. Kopach, I.N. Ruskov, V.R. Skoy, T.Yu. Tretyakova, N.I. Zamyatin, D. Wang, F.A. Aliev, C. Hramco, A. Gandhi, A.Kumar, S. Dabylova, E.P. Bogolubov, Yu.N. Barmakov, Physics of Atomic Nuclei, Vol. 81, No. 5, pp. 588–594 (2018).
33. Inelastic Neutron Scattering Study of ^{76}Se, S. Mukhopadhyay, B. P. Crider, B. A. Brown, A. Chakraborty, A. Kumar, M. T. McEllistrem, E. E. Peters, F. M. Prados-Est´evez, and S. W. Yates, Phys. Rev. C 99, 014313 (2019).
34. Evaluation of the nuclear excitation functions of fast neutron-induced reactions on ^{52}Cr and ^{56}Fe isotopes A. Gandhi, V. Kumar, N. K. Rai, P. K. Prajapati, B. K. Nayak, A.Saxena, B. J. Roy, N. L. Singh, S. Mukherjee, Yu. N. Kopatch, I. N. Ruskov, D. N.Grozdanov, N. A. Fedorov & A. Kumar, Indian J. Phys 93(10) 1345–1351 (2019).
35. Investigation of an intruder band In ^{45}Sc via Coulomb Excitation, M. Matejska-Minda , R. Kumar, P.J. Napiorkowski, M. Saxena , S. Dutt , A. Agarwal , I. Ahmed, S. Bhattacharya , A. Jhingan , J. Kaur , M. Kicińska-Habior, M. Kumar, S. Kumar, D. Kumar, V. Nanal, R. Palit, N.K. Rai , M. Shuaib, A. Sood, A. Stolarz, T. Trivedi, A.K. Tyagi, R.K. Bhowmik, H.J. Wollersheim, Acta Physica Polonica B, No. 3, 411, Vol.50, (2019).
36. Cross section calculation of (n,p) and (n,2n) nuclear reactions on Zn, Mo and Pb isotopes with ~ 14 MeV neutrons, A. Gandhi, A. Sharma, Yu. N. Kopatch, N. A. Fedorov, D. N. Grozdanov, I. N. Ruskov, and A. Kumar, Journal of Radioanalytical and Nuclear Chemistry 322: 89–97 (2019).
37. Emerging collectivity from the nuclear structure of ^{132}Xe: Inelastic neutron scattering studies and shell-model calculations, E. E. Peters, A. E. Stuchbery, A. Chakraborty, B. P. Crider, S. F. Ashley, A. Kumar, M. T. McEllistrem, F. M. Prados- Estévez, and S. W. Yates, Physical Review C 99, 064321 (2019).
38. Measurement of neutron multiplicity to investigate the role of entrance channel parameters on the nuclear dissipation, N. K. Rai, A. Gandhi, Ajay Kumar, N. Saneesh, M. Kumar, G. Kaur, A. Parihari, D. Arora, K. S. Golda, A. Jhingan, P. Sugathan, T. K. Ghosh, Jhilam Sadhukhan, B. K. Nayak, Nabendu K. Deb, S. Biswas, and A. Chakraborty, Phys. Rev. C 100, 014614 (2019).
39. Neutron induced cross section measurements on gallium isotopes at neutron Energy 14.90 ± 0.01 MeV and covariance analysis, Rebecca Pachuau, B. Lalremruata, A. Gandhi, S.V. Suryanarayana, B.K. Nayak, A. Kumar, L.S. Danu, Nuclear Physics A 992, 121613 (2019).
40. Investigation of Inelastic Neutron Scattering on ^{27}Al Nuclei, N. A. Fedorov, T. Yu. Tretyakova, V. M. Bystritsky, Yu. N. Kopach, I. N. Ruskov, V. R. Skoy, D. N. Grozdanov, N. I. Zamyatin, W. Dongming, F. A. Aliev, K. Hramco, A. Kumar, A.

Gandhi, S. Dabylova, D. I. Yurkov, Yu. N. Barmakov, Physics of Atomic Nuclei 82 (4), 343 -350 (2019).

41. Measurement of the yield and angular distributions of γ-rays originating from the interaction of 14.1 neutrons with chromium nuclei, D. N. Grozdanov, N. A. Fedorov, Yu. N. Kopach, V. M. Bystritsky, T. Yu. Tretyakova, N. Ruskov, S. Dabylova, F. A. Aliev, K. Hramco, N.A. Gundorin, D. I. Dashkov, E.P. Bogolyubov, D. I. Yurkov,I.V. Zverev,A. Gandhi and A. Kumar, Physics of Atomic Nuclei 83 (3), 384–390, (2020).
42. Measuring the yields and angular distributions of gamma quanta from the interaction between 14.1 MeV neutrons and magnesium nuclei, N. A. Fedorov, D. N. Grozdanov, Yu. N. Kopach, V. M. Bystritsky, T. Yu. Tretyakova, I. N. Ruskov, V.R. Skoy, S. Dabylova, F. A. Aliev, K. Hramco, N.A. Gundorin, D. I. Dashkov, E.P. Bogolyubov, D. I. Yurkov,I.V. Zverev,A. Gandhi and A. Kumar, Bulletin of the Russian Academy of Sciences: Physics, 84(4) 367 (2020).
43. Exploitation of surrogate reaction method for deriving proton induced fission cross sections of short lived actinides, Aman Sharma, A. Gandhi, Namrata Singh, S.V. Suryanarayana, B.K. Nayak, and Ajay Kumar, J. Phys. G: Nucl. Part. Phys. 47, 065106 (2020).
44. Indication of γ-vibration in ^{123,125,127}I, Chakraborty Saikat, Sharma Hariprakash, Tiwary S, Majumder Chandrani, Banerjee Polash, Ganguly Sourav, Kumar Suresh, Kumar Ashok, Kumar Ajay, Singh R, Muralithar Sivaramakrishnan, J. Phys. G: Nucl. Part. Phys. 47, 095104 (2020).
45. Excitation functions of (n,p) and (n,2n) reactions of tantalum, rhenium, and iridium in the neutron energy range up to 20 MeV, Namrata Singh, A Gandhi, Aman Sharma, Mahesh Choudhary & A Kumar, Indian Journal of Pure & Applied Physics, Vol. 58 (4), 314 (2020).
46. Probing the low-lying level structure of ^{94}Zr through β^- decay, K Mandal, A K Mondal, A Chakraborty, E E Peters, B P Crider, C Andreoiug, P C Bender, D S Cross, G A Demand, A B Garnsworthy, P E Garrett, G Hackman, B Hadinia, S Ketelhut, Ajay Kumar, K G Leach, M T McEllistrem†, J Pore, F M Prados-Estévez, E T Rand, B Singh, E R Tardiff, Z-M Wang, J L Wood & S W Yates, Indian Journal of Pure & Applied Physics, Vol. 58(4), 223, (2020).
47. Study of pre-equilibrium contributions in proton spectra of 59Co(n,xp) reaction using TALYS-1.9 Mahesh Choudhary, Aman Sharma, A Gandhi, Namrata Singh & A Kumar, Indian Journal of Pure & Applied Physics, Vol. 58(5), 423-426 (2020).
48. Response function of a BGO detector for γ-rays with energies in the range from 0.2 MeV to 8 MeV, D N Grozdanova, N A Fedorova, Yu N Kopatch, I N Ruskov, S B Dabylovaa, F A Aliyeva, V R Skoy, C Hramcoa, T Yu Tretyakova, A Kumar, A Gandhi, A Sharma, D Wang, S K Sakhiyev & TANGRA Collaboration, Indian Journal of Pure & Applied Physics, Vol. 58(5), 427-430 (2020).
49. Quasi-elastic scattering measurements of the 28Si + 142Nd system at back-angle, S Biswas, A Chakraborty, A Jhingan, D Arora, B R Behera, R Biswas, N K Deb, S S Ghugre, P K Giri, K S Golda, G Kaur, A Kumar, M Kumar, B Mukherjee, B K Nayak, A Parihari, N K Rai, S

Rai, R Raut, R N Sahu & A K Sinha, Indian Journal of Pure & Applied Physics, Vol. 58(5), 409-414 (2020).

50. Measurement of (n,γ), (n,p), and (n,2n) reaction cross sections for sodium, potassium, copper, and iodine at neutron energy 14.92±0.02 MeV with covariance analysis, A. Gandhi, Aman Sharma, A. Kumar, Rebecca Pachuau, B. Lalremruata, S.V. Suryanarayana, L. S. Danu, Tarun Patel, Saroj Bishnoi, and B. K. Nayak, Phys. Rev. C 102, 014603 (2020).
51. Quasielastic scattering measurements in the ^{28}Si + ^{142,150}Nd systems, Saumyajit Biswas, A. Chakraborty, A. Jhingan, D. Arora, B. R. Behera, Rohan Biswas, Nabendu Kumar Deb, S. S. Ghugre, Pankaj K. Giri, K. S. Golda, G. Kaur, A. Kumar, M. Kumar, B. Mukherjee, B. K. Nayak, A. Parihari, N. K. Rai, S. Rai, R. Raut, Rudra N. Sahoo, and A. K. Sinha, Phys. Rev. C 102, 014613 (2020).
52. Investigation of different possible excitation modes in neutron-rich ^{78}As, A. K. Mondal, A. Chakraborty, K. Mandal, Ajay Kumar, Phys. Rev. C. 102, 064311 (2020).
53. Neutron radiative capture cross section for sodium with covariance analysis, A. Gandhi, Aman Sharma, A. Kumar, Rebecca Pachuau, B. Lalremruata, Mayur Mehta, Prashant N. Patil, S.V Suryanarayana, L.S. Danu, B.K. Nayak and A. Kumar, *European Physical Journal A*, 57(1), 1-12 (2021).
54. Neutron capture cross section measurement for iodine nucleus with detailed uncertainty propagation, A. Gandhi, Aman Sharma, Rebecca Pachuau, Namrata Singh, B. Lalremruata, Mayur Mehta, Prashant N. Patil, S.V Suryanarayana, L.S. Danu, B.K. Nayak and A. Kumar, Communicated (Under Review) in *Nuclear Physics A*, (2020).

List of Publications in International Conferences:

1. Pre-compound neutron evaporation in low energy heavy ion fusion reactions, Ajay Kumar, Indo-US workshop on Physics with energetic heavy ions and rare isotopes: towards a common ground between US and Indian scientists, October 16 - 19, 2005, Department of Physics, Panjab University, Chandigarh , INDIA.
2. Study of heavy-ion fusion reaction dynamics at low energy through neutron evaporation, Ajay Kumar, Gordon Research Conference, June 12-17, 2011, New London, NH, USA.
3. Neutron Cross section studies at University of Kentucky, Ajay Kumar, Physics Symposium, University of Kentucky, August 17, 2011, Lexington, USA.
4. Measurement of the Elastic and Inelastic Differential Neutron Cross Sections for ^{23}Na between 2 and 4 MeV, Ajay Kumar, M.T. McEllistrem, B.P. Crider, E.E. Peters, F.M. Prados-Estevez, A. Chakraborty, S.W. Yates, A. Sigillito, P.J. McDonough L.J. Kersting, C.J. Luke, S.F. Hicks, J.R. Vanhoy, Fourteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, August 28-September 2, 2011, University of Guelph, Canada, World Scientific, 2013 (254-259).
5. Low-lying Structure of ^{134}Xe from Inelastic Neutron Scattering,E.E. Peters, A. Chakraborty, B.P. Crider, Ajay Kumar, F.M. Prados-Estevez, S.F. Ashley, M.T. McEllistrem and S.W. Yates, Fourteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, August 28 - September 2, 2011, University of Guelph, Canada.

6. Nuclear Structure Studies of ^{76}Ge from Inelastic Neutron Scattering, B.P. Crider, A. Chakraborty, Ajay Kumar, E.E. Peters, F.M. Prados-Estevez, M.T. McEllistrem and S.W. Yates, Fourteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics, August 28 - September 2, 2011, University of Guelph, Canada.
7. Low-lying Structure of ^{132}Xe from Inelastic Neutron Scattering, E.E. Peters, A.Chakraborty, B.P. Crider, Ajay Kumar, F.M. Prados-Estevez, S.F. Ashley, M.T. McEllistrem and S.W. Yates, 2011 Fall Meeting of the APS Division of Nuclear Physics, Volume 56, Number 12, October 26–29, 2011; East Lansing, Michigan, USA.
8. Nuclear Structure Studies of ^{76}Se with the (n, n'γ) Reaction, B.P. Crider, A. Chakraborty, Ajay Kumar, E.E. Peters, F.M. Prados-Estevez, M.T. McEllistrem and S.W. Yates, 2011 Fall Meeting of the APS Division of Nuclear Physics, Volume 56, Number 12, October 26–29, 2011; East Lansing, Michigan, USA.
9. Study of the Differential Neutron Cross Sections, Ajay Kumar, M.T. McEllistrem, B.P. Crider, E.E. Peters, F.M. Prados-Estevez, A. Chakraborty, S.W. Yates, A. Sigillito, P.J. McDonough L.J. Kersting, C.J. Luke, S.F. Hicks, J.R. Vanhoy, Symposium on Emerging Needs for Nuclear Data, October 26–29, 2011; EastLansing, Michigan, USA.
10. Neutron Elastic and Inelastic Cross Section Measurements at the University of Kentucky, Ajay Kumar, M.T. McEllistrem, B.P. Crider, E.E. Peters, F.M. Prados-Estevez, A. Chakraborty, J.R. Vanhoy, Anthony Sigillito, P.J. McDonough, L.J. Kersting, C.J. Luke, S.F. Hicks, S.W. Yates, Workshop on elastic and Inelastic Neutron Scattering, September 17 - 19, 2012, Boston, Massachusetts, USA.
11. New Interpretation of the Low-Lying Collective Nuclear Structure of ^{94}Zr, A. Chakraborty, C. Andreoiu, P. Bender, B. P. Crider, D. Cross, G. Demand, A. B.Garnsworthy, P. E. Garrett, G. Hackman, B. Hadinia, S. Ketelhut, Ajay Kumar, K. Leach, M. T. McEllistrem, E. E. Peters, J.Pore, F. M. Prados-Estvez, E. Rand, B.Singh, E. Tardiff, Z. Wang, J. L. Wood, S. W. Yates, Nuclear Structure 2012 (NS12), August 13-17, 2012, Argonne National Laboratory, USA.
12. Nuclear Structure Studies of ^{76}Se and ^{76}Ge from Inelastic Neutron Scattering, B. P. Crider, A. Chakraborty, Ajay Kumar, E. E. Peters, F. M. Prados-Estvez, S.F. Ashley, E. Elhami, S. Mukhopadhyay, J.N. Orce, M. T. McEllistrem and S. W. Yates, Nuclear Structure 2012 (NS12), August 13-17, 2012, Argonne National Laboratory, USA.
13. Low-Lying Structure of ^{132,134}Xe from Inelastic Neutron Scattering, E. E. Peters, A. Chakraborty, B. P. Crider, Ajay Kumar, F. M. Prados-Estvez, M. T. McEllistrem and S. W. Yates, Nuclear Structure 2012 (NS12), August 13-17, 2012, Argonne National Laboratory, USA.
14. Study of resonance and multi scattering effect on Neutron differential cross sections, Ajay Kumar, A. Chakraborty, B.P. Crider, M.T. Mcellistrem, E.E. Peters, F.M. Prados-Estevz, S.W. Yates, S. F. Hicks, L. J. Kersting, C.J. Luke, P. J. Mcdonough, A. J. Siglitto and J.R. Vanhoy, Proceedings of the International DAE Symp. On Nucl. Phys. 58 (2013).
15. Three-quasiparticle Band in Iodine Nuclei, S Chakraborty, H P Sharma, S S Tiwary, P Banerjee, S. Ganguly, A Kumar, N Kaur, S Kumar, S Muralithar, R P Singh, L Chaturvedi,

Ajay Kumar, A K Jain, S Laxhminarayan, Proceedings of the International DAE Symp. On Nucl. Phys. 58, 286 (2013).

16. No-spin states and low-lying structures in ^{130}Xe and ^{136}Xe, T.J. Ross, E.E.Peters, A. Chakraborty, B.P. Crider, Ajay Kumar, S.H. Liu, M.T. McEllistrem, F.M. Prados-Estévez, J.R. Vanhoy, and S.W. Yates, Fifteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics(CGS15), August 25-August 29, 2014, Dresden, Germany.
17. Inelastic neutron scattering studies of ^{132,134}Xe: Elucidating structure in a transitional region and possible interferences for 0νββ searches, E.E. Peters, T.J. Ross, A. Chakraborty, B.P. Crider, Ajay Kumar, M.T. McEllistrem, F.M. Prados-Estévez, S.W. Yates, Fifteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics (CGS15), August 25 to August 29, 2014, Dresden, Germany.
18. The transitional structure of ^{132,134}Xe from inelastic neutron scattering, E. E. Peters, T. J. Ross, A. Chakraborty, B. P. Crider , A. Kumar , M. T. McEllistrem, F. M. Prados-Est´evez , S. W. Yates, page 35,Proceedings of the ISTROS 2015, International Conference Casta-Papiernicka, Slovakia, 1–6 May, 2015, ISBN 978-80-971975-1-3
19. Studies of A = 76 Nuclei: States in ^{76}Se below 3 MeV, B.P. Crider, A. Chakraborty , A. Kumar, E.E. Peters, F.M. Prados-Est´evez, T.J. Ross, M.T. McEllistrem , and S.W. Yates, page 7, Proceedings of the ISTROS 2015, International Conference Casta-Papiernicka, Slovakia, 1–6 May, 2015, ISBN 978-80-971975-1-3
20. Re-measurement of reduced transition probabilities in ^{132}Ba*,S. Dutt , M.Saxena, R. Kumar, A. Jhingan, A. Agarwal, A. Banerjee, R.K. Bhowmik, C. Joshi, J. Kaur, A. Kumar, M. Matejska-Minda, V. Mishra, I.A. Rizvi, A. Stolarz, H.J. Wollersheim and P.J. Napiorkowski, XXXV Mazurian Lakes Conference, Poland, 2017.
21. Evaluation of Neutron Induced Cross Section Data Using Empire 3.2.2 and Talys 1.8 Codes, A. Gandhi, B.J. Roy, V. Mishra, N.K. Rai, V. Kumar, Y. Sawant, B.K. Nayak, A. Saxena, S. Mukherjee, N.L. Singh, Yu.N. Kopatch, I.N. Ruskov, and A. Kumar, Proceedings of the XXV International Seminar on Interaction of Neutrons with Nuclei, (2017). (ISBN-978-5-9530-0485-5).
22. Study of 14.1 MeV neutrons inelastic scattering on Iron, N.A. Fedorov, T.Yu. Tretyakova, Yu.N. Kopach, V.M. Bystritskiy, D.N. Grozdanov, F.A. Aliev, I.N. Ruskov, V.R. Skoy, S. Dabylova, A.V. Gorelikov, C. Hramco, A. Kumar, A. Gandhi, D. Wang, E.P. Bogolubov and D.I. Yurkov, Proceedings of the XXVI International Seminar on Interaction of Neutrons with Nuclei, 80-87, 2018.(ISBN-978-5-9530-0512-8).
23. Optimization of characteristic of BGO gamma-ray detectors, V.M. Bystritsky, Yu.N. Kopatch, V.R. Skoy, I.N. Ruskov, T.Yu. Tretyakova, N.A. Fedorov, D.N. Grozdanov, A.Gandhi, F.A. Aliyev, C. Hramco, D. Wang , P.K. Prajapati, N.K. Rai, A. Sharma, N.L. Singh, S. Mukherjee and A. Kumar, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018) 1110.
24. Response function of “Romasha” Gamma-Ray Spectrometer, A. Gandhi, D.N. Grozdanov, N.A. Fedorov, F.A. Aliyev, D. Wang, Yu.N. Kopatch, V.R. Skoy, V.M. Bystritsky, I.N. Ruskov, T.Yu. Tretyakova, C. Hramco, P.K. Prajapati, N.K. Rai, A. Sharma, N.L. Singh, S. Mukherjee and A. Kumar, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018) 1112.

25. Measurement of neutron multiplicity to investigate the nature of nuclear dissipation, N.K. Rai, A. Gandhi, A. Sharma, N. Saneesh, M. Kumar, G. Kaur, A. Parihari, D. Arora, N.K. Deb, S Biswas, T.K. Ghosh, K.S. Golda, A. Jhingan, P. Sugathan, B.K. Nayak, and Ajay Kumar, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018) 396.
26. A study for measuring proton induced fission cross sections using surrogate reaction method, Aman Sharma, Aman Gandhi, A. Kumar, S.V. Suryanarayana, and B.K. Nayak, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018) 408.
27. Investigation of the medium-spin level structure of ^{78}Se, K. Mandal, A.K. Mondal, A.Chakraborty, S. Ali, R. Banik, S. Bhattacharya, S. Bhattacharyya, D.C. Biswas, S. Biswas, S. Chattarjee, S.K. Das, A. Dey, U.S. Ghosh, S.S. Ghugre, A. Goswami, Krishichayan, A. Kumar, V. Kumar, B. Mukherjee, G. Mukherjee, S. Mukhopadhyay, S. Nandi, S. Rai, R. Raut, and S. Samanta, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018), 274.
28. Observation of triaxiality in the transitional ^{132}Ba nucleus via B(E2↑) measurements, S. Dutt, M. Saxena, R. Kumar, P. J. Napiorkowski, T. Abraham, A. Agarwal, J.M. Allmond, A. Banerjee, R. K. Bhowmik, C. Joshi, J. Kaur, A. Kumar, A.Gawlik, K. Hadyńska-Klęk, M. Hlebowicz, J. Iwanicki, A. Jhingan, M. Kisieliński, M.Komorowska, M. Kowalczyk, T. Marchlewski, M. Matejska-Minda, V. Mishra, F.Oleszczuk, M. Palacz, W. Piątek, L. Próchniak, I.A. Rizvi, J. Samorajczyk, J. Srebrny, Stolarz, A. Tucholski, W. Wróblewski, K. Wrzosek-Lipska, and H.JWollersheim, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018), 294.
29. Fabrication of the tungsten targets for the nuclear reaction studies at IUAC, N. K. Rai, Vivek Mishra, Abhilash. S. R, D. Kabiraj, and Ajay Kumar, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018), 1056.
30. Dynamical hindrance effect in fusion for the decay of the compound nucleus ^{64}Zn, H. Arora, Gulzar Singh, B. R. Behera, Jagdeep Kaur, Ajay Tyagi, Hardev Singh, Rohit Sandal, Varinderjit Singh, Maninder Kaur, Ashok Kumar, K.P. Singh, K.S. Golda, R. P. Singh and S.K. Datta, Proceedings of the DAE Symp on Nucl. Phys. 63 (2018), 674.
31. Gamma-ray response function of NaI(Tl) and BGO scintillation detectors, D.N. Grozdanov N.A. Fedorov, Yu.N. Kopach, I.N. Ruskov, V.M. Bystritsky, S.B. Dabylova, F.A. Aliyev, V.R. Skoy, C. Hramco, T.Yu. Tretyakova, A. Kumar, A. Gandhi, D. Wang, S.K. Sakhiyev and TANGRA collaboration, International Conference on New Frontiers in Nuclear Physics, 2019, 32.
32. Measurements of gamma-ray yields and angular distributions from (n,xγ)-type reactions using tagged neutron method, D.N. Grozdanov, N.A. Fedorov, Yu.N. Kopach, I.N.Ruskov, V.M. Bystritsky, T.Yu. Tretyakova, V.M. Bystritsky, S.B. Dabylova, F.A. Aliyev, V.R. Skoy, C. Hramco, A. Kumar, A.Gandhi, D. Wang, S.K. Sakhiyev and TANGRA collaboration, International Conference on New Frontiers in Nuclear Physics, 2019, 37.
33. Neutron multiplicity as a probe to study the nuclear dissipation in heavy ion fusion-fission dynamics, N.K. Rai, A. Gandhi, A. Sharma, N. Saneesh, M. Kumar, G. Kaur, A. Parihari, D. Arora, N.K. Deb, S. Biswas, Jhilam Sadhukhan, T.K. Ghosh, K. S. Golda, A. Jhingan, P.

Sugathan, B. K. Nayak, and Ajay Kumar, International Conference on New Frontiers in Nuclear Physics, 2019, 39.

34. Quasi-elastic scattering measurements of $^{28}Si+^{142}Nd$ at back-angles, S. Biswas, A. Chakraborty, A. Jhingan, D. Arora , B. R. Behera , R. Biswas, N.K. Deb , S.S. Ghugre , P.K. Giri , K.S. Golda , G. Kaur , A. Kumar , M. Kumar , B. Mukherjee , B. K. Nayak, A. Parihari, N.K. Rai, S. Rai, R. Raut, R.N. Sahu , A.K. Sinha, International Conference on New Frontiers in Nuclear Physics, 2019, 54.
35. Angular Distribution of 1.368 MeV Gamma-Rays from Inelastic Scattering of 14.1 MeV Neutrons on ^{24}Mg, I.N. Ruskov, Yu.N.Kopatch, V.M.Bystritsky, D.N.Grozdanov, N.A.Fedorov, T.Yu. Tretyakova, V.R. Skoy, S. Dabylova, F.A. Aliyev, C. Hramco, A. Kumar, A. Gandhi, D. Wang, E.P. Bogolyubov, Yu.N. Barmakov, and TANGRA collaboration, Proceedings of the XXVII International Seminar on Interaction of Neutrons with Nuclei, 117, 2019 (ISBN 978-5-9530-0515-9).
36. Model analysis and comparison in symmetric and asymmetric reactions, Viveka, N.K. Rai, A. Gandhi, Aman Sharma, M. Choudhary, Namrata Singh and A. Kumar, International Conference on New Frontiers in Nuclear Physics, 2019, 69.
37. Study of isotopic effect and N-Z ratio in (n,p) reaction cross section for stable elements ($20 \leq Z \geq 60$) from reaction threshold to 30 MeV, A. Gandhi, Aman Sharma, M. Choudhary, Namrata Singh, Viveka and A. Kumar, International Conference on New Frontiers in Nuclear Physics, 2019, 109.
38. Study of pre-equilibrium contributions in proton spectra of $^{59}Co(n,xp)$ reaction using TALYS 1.9, M. Choudhary, Aman Sharma, A. Gandhi, Namrata Singh, Viveka, and A. Kumar, International Conference on New Frontiers in Nuclear Physics, 2019, 110.
39. Excitation functions of (n,p) and (n,2n) reactions of Tantalum, Rhenium and Iridium in the Neutron Energy Range up to 20 MeV, Namrata Singh, A. Gandhi, A. Sharma, M. Choudhary, Viveka, and A. Kumar, International Conference on New Frontiers in Nuclear Physics, 2019, 111.
40. Theoretical study of $^{nat}Zn(\alpha,x)$ and $^{66}Zn(\alpha,2n)$ reactions for the production of ^{68}Ge using TALYS, Aman Sharma, A. Gandhi, M. Choudhary, Namrata Singh, Viveka, and A. Kumar, International Conference on New Frontiers in Nuclear Physics, 2019, 113.
41. Study of heavy ion fusion reaction dynamics through neutron evaporation, Gordan research conference on Nuclear Chemistry, June 12-17, 2011, New London, USA.
42. Fast neutrons as a probe for elemental analysis, nuclear reaction studies and cross section measurements, RFBR-DST Collaboration meeting, June 21, 2017, Moscow, Russia.
43. Measurements of the γ ray emission cross-sections in Fe(n,xγ)-type reactions, Nikita Fedorov, T. Yu. Tretyakova, Yu.N. Kopatch, D.N. Grozdanov, F.A. Aliyev, I.N. Ruskov, V.R. Skoy, S. Dabylova, C. Hramco, S.K. Sakhiyev, A. Kumar, A. Gandhi, D. Wang and A. Sharma, Proceedings of the LXX International conference "NUCLEUS – 2020", 75, 2020 (978-5-9651-0587-8).
44. Angular distribution of gamma rays from the inelastic scattering of 14.1 MeV neutrons on Sodium and Chlorine, S.B. Dabylova, D.N. Grozdanov, N.A. Fedorov, Yu.N. Kopatch, I.N. Ruskov, F.A. Aliyev, V.R. Skoy, C. Hramco, T.Yu. Tretyakova, S.K. Sakhiyev, A. Kumar, A. Gandhi, and TANGRA

collaboration, Proceedings of the LXX International conference "NUCLEUS – 2020", 76, 2020 (978-5-9651-0587-8).

45. Characteristics of detectors of gamma rays and neutrons, D.N. Grozdanov, N. A. Fedorov, Yu.N. Kopach, I.N. Ruskov, S.B. Dabylova, F.A. Aliyev, V.R. Skoy, C. Hramco, T.Yu. Tretyakova, P.V. Sedyshev, N. Simbirtseva, A. Yergashov, A. Kumar, A. Gandhi, A. Sharma, D. Wang and S.K. Sakhiyev, Proceedings of the LXX International conference "NUCLEUS – 2020", 238, 2020 (978-5-9651-0587-8).

Research Publications in National Symposium/Conferences:

1. Entrance channel effects in the decay of compound nucleus, R. Singh, A. Kumar , Ajay Kumar, J. Kaur, S. K. Datta, G. Singh, S. Kataria and I. M. Govil, DAE Symposium on Nuclear Physics, Chandigarh (1999) p124.
2. Neutron radiation as a probe for reaction mechanism for heavy-ion induced Reaction, Ajay Kumar, J. Kaur, A. Kumar, G. Singh, B. R. Behera, S. K. Datta and I.M. Govil, National Symposium on Radiation Physics, (2001), Patiala.
3. Entrance Channel effects in the decay of the compound nucleus ^{79}Rb, J. Kaur, I. M Govil, G. Singh, A. Kumar, Ajay Kumar, B. B. Behera and S. K. Datta, DAE Symposium on Nuclear Physics, Calcutta (2001) 213.
4. Search For Entrance Channel Effects in Heavy ion fusion reactions via neutron Evaporation, Ajay Kumar, J. Kaur, A. Kumar, G. Singh, Rakesh kumar, S. K. Datta, M.B. Chatterjee, B.K. Yogi and I.M. Govil, DAE Symposium on Nuclear Physics, Calcutta (2001) 214.
5. Study of the entrance channel effects in the decay of compound Nucleus, Ajay Kumar, A. Kumar, S.K. Datta and I.M. Govil, DAE Symposium on Nuclear Physics, Thirunelveli 2002.
6. Study of the Entrance Channel effects via the compound system ^{80}Sr, J. Kaur, Ajay Kumar, A. Kumar, G. Singh, B. R. Behera, S.K. Datta and I.M. Govil, DAE Symposium on Nuclear Physics, Thirunelveli (2002).
7. α-Particle Evaporation from Compound Nucleus ^{76}Kr, Ajay Kumar, A. Kumar, G. Singh, Hardev Singh, K.S. Golda, S. K. Datta and I. M. Govil, DAE Symposium on Nuclear Physics, BARC, Mumbai (2003).
8. Entrance channel effects in the decay of compound nucleus, Ajay Kumar, A. Kumar, G. Singh, Hardev Singh, K.S. Golda, S. K. Datta and I. M. Govil, 91st Indian Science Congress, Chandigarh (2004) [Awarded as best poster].
9. Temperature dependence of level density in heavy-ion fusion reactions, Ajay Kumar, A. Kumar, G. Singh, Hardev Singh, K.S. Golda, S. K. Datta and I. M. Govil, DAE Symposium, 8-12 Dec. 2004, BHU, Varanasi, India.
10. Neutron emission from low energy heavy ion fusion reactions, Ajay Kumar, Hardev Singh, G. Singh, K.S. Golda, S. K. Datta and I. M. Govil, DAE Symposium, 11-15 Dec. 2007, Sambalpur University, Burla, Orissa, India.
11. Measurement of the Elastic and Inelastic Differential Neutron Cross Sections for ^{23}Na between 1 and 4 MeV, Ajay Kumar, M.T. McEllistrem, B.P. Crider, E.E. Peters, F.M.

Prados-Estevez, A. Chakraborty, J.R. Vanhoy, Anthony Sigillito, P.J. McDonough, L.J. Kersting, C.J. Luke, S.F. Hicks, S.W. Yates, DAE Symposium, December 03-07, 2012, India.

12. Low-lying Band Structure and the Onset of Octupole Collectivity in ^{150}Nd, A. Chakraborty,F. M. Prados-Estevez,S. N. Choudry, B. P. Crider, P. E. Garrett, W. D. Kulp, Ajay Kumar, M. T. McEllistrem, S. Mukhopadhyay, M. G. Mynk, J. N. Orce, E.E. Peters, J. L. Wood,S. W. Yates, DAE Symposium, December 03-07, 2012, India.
13. Polarization measurements of ^{127}I, Hari Prakash Sharma, Polash Banerjee, Sourav Ganguly, Saikat Chakraborty, Ashok Kumar, Navneet Kaur, Suresh Kumar, S Muralithar, R P Singh, L Chaturvedi, Ajay Kumar, A K Jain, S Laxhminarayan, DAE Symposium, December 03-07, 2012, India.
14. Low-lying Level Structure of ^{94}Zr: Puzzling Past and Exciting Present, A. Chakraborty, C. Andreoiu, P. Bender, B. P. Crider, D. Cross, G. Demand, A. B. Garnsworthy, P. E. Garrett, G. Hackman, B. Hadinia, S. Ketelhut, Ajay Kumar,K. Leach, M. T. McEllistrem, E. E. Peters, J. Pore, F. M. Prados-Estvez, E. Rand, B.Singh, E. Tardiff, Z. Wang,J. L. Wood,S. W. Yates, DAE Symposium, December 03-07, 2012, India.
15. A Comparative Study of Measured Neutron Cross Sections with Statistical Model Calculations, A. Kumar, M. Balasubramaniam, A. Chakraborty, B.P. Crider, S.F. Hicks, C. Karthikraj, L. J. Kersting, C.J. Luke, P. J. Mcdonough, M.T. McEllistrem, E.E. Peters, F.M. Prados, A. J. Sigillito, M.M. Upadhyay, J.R. Vanhoy, S.W. Yates, pp 588, DAE Symposium, December, 2014, India.
16. Identification of collective proton excitations in ^{94}Zr, K. Mandal, H. Sultana, A. Chakraborty, E.E. Peters, B.P. Crider, C. Andreoiu, P.C. Bender, D.S. Cross, G.A. Demand, A.B. Garnsworthy, P.E. Garrett, G. Hackman, B. Hadinia, S. Ketelhut, Ajay Kumar, K.G. Leach, M.T. McEllistrem, J. Pore, F.M. Prados-Estevez, E.T. Rand, B. Singh, E.R. Tardiff, Z.-M. Wang, J.L. Wood, S.W. Yates, pp 264, DAE Symposium, December, 2015, India.
17. Measurement of neutron multiplicity to investigate the role of entrance channel and E/A in nuclear dissipation, V. Mishra, N.K. Rai, Ajay Kumar, DAE Symposium, 2016.
18. Coulomb excitation measurement of ^{132}Ba at IUAC, New Delhi, S. Dutt, M. Saxena, R. Kumar, A. Jhingan, Avinash Agarwal, A. Banerjee, R. K. Bhowmik, C.Joshi, J. Kaur, A. Kumar, M. Matejska-Minda Mishra, V. Mishra, I. A. Rizvi, A. Stolarz, H. J. Wollersheim, P. J. Napiorkowski, DAE, Symposium, 2016.
19. Angular momentum hindrance in mass asymmetric reactions at higher energy range, N.K. Rai, V. Mishra, Ajay Kumar, DAE, Symposium, 2016.
20. Measurement of neutron multiplicity to investigate the role of entrance channel and E/A in nuclear dissipation, V. Mishra, N.K. Rai, Ajay Kumar, National Conference on Recent Trends In Nuclear Physics, Aligarh-2015.
21. Study of anomalous deviations from statistical evaporation spectra in heavy ion fusion reactions, N.K. Rai, V. Mishra, Ajay Kumar, National Conference on Recent Trends In Nuclear Physics, Aligarh-2015.

22. Study of neutron induced reactions using EMPIRE-3 and TALYS, A.Gandhi, B.J. Roy, V. Mishra, N.K. Rai, V. Kumar, Y. Sawant, B.K. Nayak, A. Saxena, Yu.N. Kopatch, I.N. Ruskov and A. Kumar, DAE Symposium, 2017.
23. “Romashka" and "Romasha" gamma-ray spectrometers, V.M. Bystritsky, Yu.N. Kopatch, V.R. Skoy, I.N. Ruskov, T.Yu. Tretyakova, N.A. Fedorov, D.N. Grozdanov, A. Gandhi, F.A. Aliyev, C. Hramco, W. Dongming, Yu.N. Barmakov, E.P. Bogolyubov, V.Kumar, V. Mishra, N.K. Rai and A. Kumar, DAE, Symposium, 2017.
24. TANGRA: Tagged Neutrons and Gamma Rays, A. Gandhi, D.N. Grozdanov, F.A.Aliyev, W. Dongming, N.A. Fedorov, Yu.N. Kopatch, V.R. Skoy, V.M. Bystritsky, I.N. Ruskov, C. Hramco, E.P. Bogolyubov, Yu.N. Barmakov, V. Kumar, V. Mishra, N.K. Rai and A. Kumar, DAE, Symposium, 2017.
25. Effect of Isotopic and N-Z ratio in (n,p) reaction cross section for stable elements ($20 \leq Z \geq 60$) from reaction threshold to 20 MeV, A. Gandhi, V. Mishra, N.K. Rai, V. Kumar and Ajay Kumar, Marie Curie Sesquicentennial Conference-2017, November 5-7, 2017 at JNU, New Delhi.
26. Pre-scission neutron emission from 12C+204Pb and 19F+197Au reactions, Hardev Singh, Ajay Kumar et al., DAE Symposium on Nuclear Physics, Sambalpur University, Burla, Orissa, December 11-15, 2007.
27. Study of variation of neutron induced cross-section for ^{23}Na, ^{39}K and ^{41}K, A. Gandhi, A. Sharma and A. Kumar, Proceeding of the 4th Biennial Symposium on Nuclear and RadioChemistry, A-5 (NUCAR-2019).
28. Proton induced fission reaction through surrogate reaction method, Aman Sharma, Aman Gandhi, S.V. Suryanarayana, B.K. Nayak and Ajay Kumar, Proceeding of the 4th Biennial Symposium on Nuclear and RadioChemistry, A-8 (NUCAR-2019).
29. Prior estimation of covariance matrix of reaction cross sections using Unscented Transform Method, Aman Sharma, A. Gandhi, A. Kumar, Proceedings of the DAE Symp on Nucl. Phys. 64, 2019, 856.
30. Barrier distribution for the ^{28}Si+^{150}Nd system through quasi-elastic excitation function measurement, S.Biswas, A.Chakraborty, A.Jhingan, D.Arora, B.R.Behera, Rohan Biswas, Nabendu Kumar Deb, S.S.Ghugre, Pankaj K. Giri, K.S. Golda, G.Kaur, A.Kumar, M. Kumar, B. Mukherjee, B. K. Nayak, A.Parihari, N.K. Rai, S.Rai, R.Raut, Rudra N. Sahoo, A.K. Sinha, Proceedings of the DAE Symp on Nucl. Phys. 64, 2019, 439.