

Prof. Samarjit Sihotra

Professor
Department of Physics
Panjab University, Chandigarh
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Area of Research

- ❖ Nuclear Structure studies in Experimental Nuclear Physics.
- ❖ Accelerator and Detector- Related R&D and Prototyping.
- ❖ Lifetime Measurements and GEANT4 Simulations

Teaching Experience (courses taught)

(Mathematical Physics, Advanced Mathematical Physics, Quantum Mechanics, Advanced Quantum Mechanics, Statistical Mechanics, Statistical Mechanics-II, Electrodynamics, Nuclear physics, Particle physics, Experimental Techniques, Resonance Techniques, Vacuum and Low temperature techniques, EMT and Modern Physics).

Educational Qualifications

- ❖ M. Sc. Physics -2004
- ❖ Ph. D in *Experimental Nuclear Physics*-2009. *Title of Thesis*
(Nuclear Structure Studies in A~100-130 Mass region)

Awards/Scholarships

- ❖ National Scholarship at secondary stage (H.P. Govt.)
- ❖ GATE qualified.
- ❖ CSIR NET- JRF (short listed for Shyama Prasad Mukherjee Fellowship Examination).

Research Experience and Research Projects

- ❖ Doing research in experimental Nuclear physics in Nuclear structure studies since 2004.
- ❖ GEANT4 Simulations for detectors R&D.
- ❖ Target materials fabrications and analytic techniques
- ❖ Lifetime measurements; Fast timing measurement.

❖ **Working/completed the projects entitled:**

1. Accelerator and Detector- Related R&D and Prototyping” In Pre operative Programme for Indian participation in FAIR Project at GSI, Darmstadt, Germany; funded by DST (2009-2013).
2. Normal deformed and strongly deformed band structures in Lu and Hf- Nuclei; funded by IUAC, New delhi (2011-2014).
3. Nuclear Structure Studies in A~100 and 130 Mass regions; funded by UGC (2012-2015)
4. Nuclear Structure studies in some Ag, Rh, and Pd Isotopes close to N=Z=50 shell closure; funded by IUAC, New delhi (2013-2016).
5. Labr3:Ce; Scintillation detectors for fast timing measurements: funded by DST-SERB (2017-2021).
6. Multiparticle configurations in some proton rich lu and hf nuclei : funded by IUAC - UGC) (2017-2020)
7. Nuclear structure close to z=50 shell closure nuclei through nuclear fusion evaporation reactions : funded by CSIR (2018-2021)
8. Nuclear structure studies in some neutron deficient nuclei in A~100 mass region nuclei; funded by IUAC, New delhi (2022-2025).
9. Nuclear structure studies and lifetime measurements in A~160 Mass region nuclei: DST-SERB (2023-2026)

❖ M. Phil thesis Supervised -3.

❖ Ph. D thesis supervised & enrolled -4

PAPERS PUBLISHED IN REFEREED INTERNATIONAL RESEARCH JOURNALS

1. **Rotational structures in the ^{125}Cs Nucleus;** K. Singh, **S. Sihotra**, S.S. Malik, J. Goswamy, D. Mehta, N. Singh, R. Kumar, R.P. Singh, S. Muralithar, E. S. Paul, J.A. Sheikh, and C.R. Praharaj, Eur. Phys. J. A 27, 321 (2006).
2. **Multiple Band Structures in ^{131}Cs Nucleus;** **S. Sihotra**, R. Palit, Z. Naik, P.K. Joshi, A.Y. Deo, J. Goswamy, S.S. Malik, D. Mehta, C. R. Praharaj, H.C. Jain, and N. Singh, Physical Review C 78, 034313 (2008).
3. **Band structures in ^{129}Cs ,** **S. Sihotra**, K. Singh, S.S. Malik, J. Goswamy, R. Palit, Z. Naik, D. Mehta, N. Singh, R. Kumar, R.P. Singh, and S. Muralithar, Physical Review C 79, 044317 (2009).
4. **Structure of dipole bands in ^{106}In ,** A.Y. Deo, R. Palit, Z. Naik, **S. Sihotra**, S. Kumar, P. K. Joshi, I. Mazumdar, R. Kshetri, D. Mehta, and H.C. Jain, Physical Review C 79, 067304 (2009).
5. **Level structures in the ^{107}In Nucleus and their microscopic descriptions,** **S. Sihotra**, Z. Naik, R. Palit, A.Y. Deo, S. Kumar, P.K. Joshi, D. Mehta, and N. Singh, Eur. Phys. J. A. 43, 45 (2010).
6. **Structure of degenerate dipole bands in ^{106}In and investigation of similar structure in neighbouring odd-odd isotopes,** R. Palit, A.Y. Deo, Z. Naik, **S. Sihotra**, S. Kumar, P. K. Joshi, I. Mazumdar, D. Mehta, and H.C. Jain, Nucl Phys A **834**, 81 (2010).
7. **Excited states in ^{99}Pd ,** **S. Sihotra**, Z. Naik, S. Kumar, K. Singh, J. Goswamy, R. Kumar, R.P. Singh, S. Muralithar, N. Singh, R. Palit, and D. Mehta, Physical Review C **83**, 024313 (2011).
8. **Structural change of the unique-parity $\pi h_{11/2} \otimes \nu h_{11/2}$ configuration in ^{134}Cs ,** H. Pai, G. Mukherjee, A. Raghav, R. Palit, C. Bhattacharya, S. Chanda, T. Bhattacharjee, S. Bhattacharyya, S. K. Basu, A. Goswami, P. K. Joshi, B. S. Naidu, Sushil K. Sharma, A. Y. Deo, Z. Naik, R. K. Bhowmik, S. Muralithar, R. P. Singh, S. Kumar, **S. Sihotra**, and D. Mehta, Physical Review C 84, 041301(R) (2011).
9. **Small quadrupole deformation for the dipole bands in ^{112}In ,** T. Trivedi, R. Palit, J. Sethi, S. Saha, S. Kumar, Z. Naik, V. V. Parkar, B. S. Naidu, A. Y. Deo, A. Raghav, P. K. Joshi, H. C. Jain, **S. Sihotra**, D. Mehta, A. K. Jain, D. Choudhury, D. Negi, S. Roy, S. Chattopadhyay, A. K. Singh, P. Singh, D. C. Biswas, R. K. Bhowmik, S. Muralithar, R. P. Singh, R. Kumar, and K. Rani, Physical Review C 85, 014327 (2012).
10. **Structure of dipole bands in ^{112}In : Through Lifetime Measurement,** T. Trivedi, R. Palit, J. Sethi, S. Saha, S. Kumar, Z. Naik, V. V. Parkar, B. S. Naidu, A. Y. Deo, A. Raghav, P. K. Joshi, H. C. Jain, **S. Sihotra**, D. Mehta, A. K. Jain, D. Choudhury, D. Negi, S. Roy, S. Chattopadhyay, A. K. Singh, P. Singh, D. C. Biswas, R. K. Bhowmik, S. Muralithar, R. P. Singh, R. Kumar, and K. Rani, Journal of Physics: Conference Series 381, 012061 (2012).

- 11. New spectroscopic informations in $^{98,99}\text{Rh}$ nuclei**, S. Kumar, S. Sihotra, K. Singh, V. Singh, J. Goswami, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, S. K. Ghorui, C. R. Praharaj and D. Mehta, AIP Conf. Proc. 1524, 127-131 (2013); doi: 10.1063/1.4801694.
- 12. Structure of degenerate dipole bands in ^{108}Ag** , J. Sethi, R. Palit, S. Saha, T. Trivedi, G.H. Bhat, J.A. Sheikh, P. Datta, J.J. Carroll, S. Chattopadhyay, R. Donthi, U. Garg, S. Jadhav, H.C. Jain, S. Karamian, S. Kumar, M. S. Litz, D. Mehta, B.S. Naidu, Z. Naik, S. Sihotra, P.M. Walker :Physics Letters B, Volume 725, Issue 1-3, p. 85-91(2013).
- 13. Band structures in doubly odd ^{98}Rh** , S. Kumar, S. Sihotra, K. Singh, V. Singh, Sandeep, J. Goswamy, N. Singh, D. Mehta, S. S. Malik, R. Palit, R. Kumar, R. P. Singh, S. Muralithar, and R. K. Bhowmik, Physical Review C 89, 034303 (2014).
- 14. Study of the level Structure of ^{108}Ag** , J. Sethi, R. Palit, S. Saha, T. Trivedi, G.H. Bhat, J.A. Sheikh, P. Datta, J.J. Carroll, S. Chattopadhyay, R. Donthi, U. Garg, S. Jadhav, H.C. Jain, S. Karamian, S. Kumar, M. S. Litz, D. Mehta, B.S. Naidu, Z. Naik, S. Sihotra, P. M. Walker : EPJ web of Conferences 66, 02097(2014).
- 15. Nuclear structure studies close to $N = Z = 50$** Kumar, S.; Sihotra, S.; Naik, Z.; Singh, K.; Goswami, J.; Singh, N.; Palit, R.; Muralithar, S.; Kumar, R.; Singh, R. P.; Bhowmik, R. K.; Mehta, D. AIP, Volume 1609, Issue 1, p.142-150 (2014)
- 16. Band structures in doubly odd ^{99}Rh** , S. Kumar, V. Singh, K. Singh, S. Sihotra, J. Goswamy, N. Singh, S. S. Malik, I. Rangnarson, T. Trevedi, R. Palit, R. Kumar, R. P. Singh, S. Muralithar, and R. K. Bhowmik , A. Bharti, D. Mehta, J. Phys. G: Nucl. Part. Phys. 41 (2014) 105110 (27pp) :doi:10.1088/0954-3899/41/10/105110
- 17. SPECTROSCOPY OF THE LOW-LYING STATES NEAR THE HIGH SPIN ISOMER IN ^{108}Ag** : J. Sethi, R. Palit, S. Saha, T. Trivedi, G.H. Bhat, J.A. Sheikh, P. Datta, J.J. Carroll, S. Chattopadhyay, R. Donthi, U. Garg, S. Jadhav, H.C. Jain, S. Karamian, S. Kumar, M. S. Litz, D. Mehta, B.S. Naidu, Z. Naik, S. Sihotra, P. M. Walker : ACTAPHYSICAPOLONICA B, Vol. 46, 703 (2015).
- 18. Low-lying states near the $I^\pi = 6^+$ isomer in ^{108}Ag** ; Jasmine Sethi, R Palit, J.J. Carroll, S. Karamian, S. Saha, S. Biswas, Z. Naik, Tarkeshwar Trivedi, M.S. Litz, P. Datta, S. Chattopadhyay, R. Donthi, Umesh Garg, S. Jadhav, H.C. Jain, S. Kumar, Devinder Mehta, B.S. Naidu, G.H. Bhat, J.A. Sheikh, S. Sihotra, Philip Walker J. Phys. G: Nucl. Part. Phys. 43(2016) 015103 (15pp).
- 19. Structure of dipoles bands in ^{102}Ag** ; V. Singh, S.Sihotra, S. S. Malik. G.H. Bhat, J.A. Sheikh, R. Palit, J. A. Sheikh, S. Kumar, N. Singh, K. Singh, J. Goswamy, J. Sethi, S. Saha, T. Trivedi, and D. Mehta Physical Review C **94**, 044320 (2016).
- 20. Longitudinal Wobbling in ^{133}La** ; S. Biswas, R. Palit, U. Garg, G. H. Bhat, S. Frauendorf, W. Li, J. A. Sheikh, J. Sethi, S. Saha, Purnima Singh, D. Choudhury, J. T. Matta, A. D. yangeakaa, W. A. Dar, V. Singh, S. Sihotra. <http://arxiv.org/abs/1608.07840v1>.
- 21. Investigation of Antimagnetic rotation in ^{101}Pd** ; V Singh, S Sihotra , S Roy, M Kaur, S Saha, J Sethi, R Palit, N Singh, S S Malik, H C Jain and D Mehta, **J. Phys. G: Nucl. Part. Phys.** **44** (2017) 075105 (15pp).

22. Band Structures in ^{101}Pd ; V. Singh, S. Sihotra, G. H. Bhat, J. A. Sheikh, M. Kaur, S. Kumar, K. Singh, J. Goswamy, S. Saha, J. Sethi, R. Palit, S. S. Malik, N. Singh, U. Garg, and D. Mehta, Phys. Rev. C 95, 064312, 2017
23. **High-spin states in ^{133}Cs and the shell model description**; S. Biswas, R. Palit, J. Sethi, S. Saha, A. Raghav, U. Garg, Md. S. R. Laskar, F. S. Babra, Z. Naik, S. Sharma, A. Y. Deo, V. V. Parkar, B. S. Naidu, R. Donthi, S. Jadhav, H. C. Jain, P. K. Joshi, **S. Sihotra**, S. Kumar, D. Mehta, G. Mukherjee, A. Goswami, and P. C. Srivastava, Phys. Rev. C 95, 064320 (2017).
24. **Shell-model Description in ^{99}Rh and Systematics of Odd-A Rh Isotopes**: S Kumar, **S Sihotra**, V Singh, J Rather, M Kaur, J Goswamy, N Singh, D Mehta, T Trivedi, RP Singh, S Muralithar, R Palit; Acta Physica Polonica B, 2019 DOI:10.5506/APhysPolB.50.159
25. **Longitudinal wobbling in ^{133}La** ; S Biswas, R Palit, S Frauendorf, U Garg, W Li, GH Bhat, JA Sheikh, J Sethi, S Saha, Purnima Singh, D Choudhury, JT Matta, AD Ayangeakaa, WA Dar, V Singh, **S Sihotra**; European Physical Journal A 55 (9), 159 ,2019.
26. **Evidence of Antimagnetic rotation in ^{100}Pd** ; **S. Sihotra**, D. Kumar, V Singh, M Kaur, S Saha, J. Sethi, R Palit, N Singh, H C Jain and D Mehta, Phys. Rev. C 102, 034321 (2020).
27. **Enhanced B(E3) strength observed in ^{137}La** ; Md. S. R. Laskar, R. Palit, E. Ideguchi, T. Inakura, S. N. Mishra, F. S. Babra, S. Bhattacharya, D. Choudhury, Biswajit Das, B. Das, P. Dey, U. Garg, A. K. Jain, A. Kundu, D. Kumar, D. Negi, S. C. Pancholi, S. Rajbanshi, **and S. Sihotra**; Phys. Rev. C 102, 034321 (2020).
28. **Measured and Geant4 simulation performance of the Hybrid array of Compton suppressed HPGe Clover and Labr3(Ce) Detectors at TIFR**: Biswajit Das et al., JI of Instum. Soc. of India Vol 51, No 1-4 , December 2021.
29. **Systematic measurements of M X-ray components X-ray fluorescence cross-sections for the elements with $77 < Z < 92$ by employing laboratory source based energy dispersive X-ray florescence setup**; Muhanad Alrakabhi et al., X-ray spectrum. 2022: 1-13 (2022).
30. **Possible AMR in ^{99}Pd** : **S. Sihotra** International Journal of Modern Physics E Vol. 31, No. 2 (2022) 2250020.
31. **Shape Coexistence in Proton Rich Se Isotopes**: A Mukherjee, S Bhattacharya, T Trivedi, RP Singh, S Muralithar, D Negi, R Palit, S Nag, S Rajbanshi, S Kumar, M Kumar Raju, D Choudhury, **S Sihotra**, R Kumar, SC Pancholi, AK Jain; Bulgarian Journal of Physics vol. 49 (2022) 108–113
32. **Fabrication of ^{75}As targets for heavy ion nuclear reactions**: **S. Sihotra***, Ashutosh Kapil, Sanjeev Kumar, D. Mehta: Vacuum 201 (2022) 111110
33. **Experimental investigation of high-spin states in ^{90}Zr** : P Dey, D Negi, R Palit, P C Srivastava, Md SR Laskar, B Das, F S Babra, S Bhattacharya, Biswajit Das, K Rojeeta Devi, R Gala, U Garg, SS Ghugre, E Ideguchi, S Kumar, A Kundu, G Mukherjee, S Muralithar, S Nag, S Nandi, M Kumar Raja, R Raut, R Santra, A Sharma, **S Sihotra**, AK Singh, RP Singh, T Trivedi: PHYSICAL REVIEW C 105, 044307 (2022).

34. **Active Collimator for the BGO Anti-Compton shield of the HPGe Clover Detector:** Biswajit Das, N.R. Khan Chowdhury, S. Saha, Md.R.S. Laskar, F.S. Babra, V. Malik, A. Kundu, P. Dey, S.K. Jadav, B.S. Naidu, A.T. Vazhappilly, **S. Sihotra** and R. Palit: **EPJ web of Conferences 288,10004 (2023))**
<https://doi.org/10.1051/epjconf/202328810004>
35. **Level structure in ^{96}Tc and Microscopic sescription description:** A K Rana, **S Sihotra**, H P Sharma, V Singh, G H Bhat, S Jehangir, J A Sheikh, N Rather, Kuldeep, N Singh, R K Bhowmik, R Kumar, R P Singh, S Muralithar, Pooja Chauhan, Dalip Singh Verma, T Trivedi, S Kumar, R Palit and D Mehta: **J. Phys. G: Nucl. Part. Phys. 51 035104 (2024):**
DOI 10.1088/1361-6471/ad1f2e
36. **Structural Investigation of ^{101}Pd and Systematic in Neighboring Even-Z and Odd-N nuclei;** AK Rana, **S Sihotra**, V Singh, Pooja Chauhan, Dalip Singh Verma, HP Sharma, D Mehta; Bulgarian Journal of Physics vol 52 2024/4/1
37. **Possible antimagnetic rotation in ^{101}Ru ;** Pooja Chauhan **S. Sihotra** Renu Joshi Dalip Singh Verma V. Singh A. K. Rana H. P. Sharma R. Palit, R. P. Singh and D. Mehta; International Journal of Modern Physics E Vol. 33, No. 10, 2450042 (2024)
38. **Study of possible antimagnetic rotation in ^{100}Ru ;** P Chauhan, S Sihotra, R Joshi, DS Verma, RP Singh, R Palit, D Mehta Nuclear Physics A 1055, 123016 (2025)
39. **Particle-coupled octupole collectivity in ^{91}Zr ;** P Dey, R Palit, E Ideguchi, T Inakura, FS Babra, Biswajit Das, U Garg, SV Jadhav, AK Jain, A Kundu, Md SR Laskar, B Maheshwari, Vishal Malik, BS Naidu, D Negi, **S Sihotra**, AT Vazhappilly, Nuclear Physics A 1057, 123035 (2025)

Publications in National/International Conferences/Symposium:

1. **Rotational structures in ^{125}Cs ,** K.Singh, **S. Sihotra**, R. Kumar, J. Goswamy, D. Mehta, N. Singh, S.S. Malik, R.P. Singh, S. Muralithar, and R.K. Bhowmik Proc. DAE Symposium Nucl. Phys. 50, 254(2005).
2. **Band structures in ^{131}Cs ,** **S. Sihotra**, K. Singh, Rajesh Kumar, J. Goswamy, D. Mehta, N. Singh, R.Palit, H.C. Jain, P.K. Joshi, and S.S. Malik, Proc. DAE Symposium Nucl. Phys. 51, 228 (2006).
3. **High spin states in ^{106}In ,** A.Y. Deo, R. Palit, **S. Sihotra**, Z. Naik, S. Kumar, P.K. Joshi, I. Mazumdar, H.C. Jain, Kausik Basu, R. Kshetri, and R. Chakrabarti, Proc. DAE Symposium Nucl. Phys. 52, 193 (2007).
4. **Microscopic explanation of observed band structures of ^{131}Cs ,** Z. Naik, R. Palit, **S. Sihotra**, A.Y. Deo, D. Mehta, and C.R. Praharaj, Proc. DAE Symposium Nucl. Phys. 52, 199 (2007).
5. **High spin states in ^{129}Cs ,** **S. Sihotra**, K. Singh, J. Goswamy, D. Mehta, N. Singh, S.S. Malik, R. Palit, R. Kumar, S. Muralithar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 52, 228 (2007).

6. ***Structures of Dipole Bands of ^{107}In*** , S. Sihotra, Z. Naik, R.Palit, A.Y. Deo, S. Kumar, P.K. Joshi, D. Mehta, and N. Singh, Proc. DAE Symposium Nucl. Phys. 53, 235 (2008).
7. ***Multiple band structures of $^{131};^{133}\text{Cs}$ isotopes***, R. Palit, **S. Sihotra**, A. Raghav, Z. Naik, K. Singh, A.Y. Deo, P.K. Joshi, J. Goswamy, S.S. Malik, D. Mehta, H.C. Jain, N. Singh, and C.R. Praharaj, Proc. CNS-RIKEN Joint International Symposium (gamma08) (2008).
8. ***Band structures in ^{129}Cs*** , **S. Sihotra**, K. Singh, J. Goswamy, S.S. Malik, D. Mehta, N. Singh, R.Palit, R. Kumar, S. Muralithar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 53, 347 (2008).
9. ***High Spin Excitation in ^{99}Pd*** , **S. Sihotra**, J. Goswamy, Z. Naik, R.Palit, S.S. Malik, D. Mehta, N. Singh, S. Muralithar, R. Kumar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 53, 351 (2008).
10. ***Investigation of positive parity Degenerate Dipole Bands ^{133}Ce*** , R. Palit, V.V. Parker, Z. Naik, H.C. Jain, P.K. Joshi, I. Mazumdar, A.Y. Deo, **S. Sihotra**, et al, ;Proc. DAE Symposium Nucl. Phys. 53, 323 (2008).
11. ***Quadrupole and Octupole collectivity in ^{99}Pd*** , **S. Sihotra**, Z. Naik, J. Goswamy, R. Palit, D. Mehta, N. Singh, S. Muralithar, R. Kumar, R.P. Singh, and R.K. Bhowmik, Proc. DAE Symposium Nucl. Phys. 54, (2009).
12. ***High spin structure of ^{133}Cs*** , A. Raghav, R. Palit, Z. Naik, A.Y. Deo, V.V. Parker, B.S. Naidu, H.C. Jain, P.K. Joshi, **S. Sihotra**, S. Kumar, D. Mehta, G. Mukherjee, and A. Goswami, Proc. DAE Symposium Nucl. Phys. 54, (2009).
13. ***High spin spectroscopy of ^{134}Cs*** , H. Pai, G. Mukherjee, S. Bhattacharyya, T. Bhattacharjee, R. Palit, A.Y. Deo, P.K. Joshi, B.S. Naidu, S. Sharma, A. Raghav, Z. Naik, A. Goswami, S. Kumar, **S. Sihotra**, D. Mehta, S.K. Basu, and S. Chanda, Proc. DAE Symposium Nucl. Phys. 54, (2009).
14. Nuclear Structure studies in A~100 and A~130 mass regions; **S. Sihotra** , DAE Symposium Proceedings in Nuclear Physics (2009), Mumbai.
15. ***Hartree-Fock microscopic description of band structures in ^{99}Pd*** ; Z. Naik, **S. Sihotra**, J. Goswamy, Proc. DAE Symposium Nucl. Phys.55, 22(2010).
16. ***Excited States in ^{98}Rh*** ; Surender Kumar, **S. Sihotra**, and K. Singh et al., Proc. DAE Symposium Nucl. Phys.55, 44 (2010).
17. ***Excited States in ^{99}Rh*** ; **S. Sihotra**, Surender Kumar, and K. Singh et al., Proc. DAE Symposium Nucl. Phys. 55, 46 (2010).
18. Excited states in ^{99}Pd , S. Sihotra, Z. Naik, **S. Kumar**, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, CHASCON (2010) Panjab University Chandigarh.

19. *Band Structures in ^{96}Ru* ; Jaspreet Kaur, **S. Sihotra**, S. Kumar, K. Singh, J. Goswamy, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, and D. Mehta, Proc. DAE Symposium Nucl. Phys. (2011)
20. *Band Structures in $^{98,99}\text{Rh}$ Nuclei*, S. Kumar, **S. Sihotra**, K. Singh, J. Goswamy, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, and D. Mehta, Proc. DAE Symposium Nucl. Phys. (2011)
21. *Implementation of Digital Constant Fraction Discrimination for fast Scintillators*; S. Saha, R. Palit, J. Sethi, T. Trivedi, S. N. Mishra, B.S. Naidu, S. Jadhav R. Donthi, S. M. Davane, S. Kumar, S. Mandal, **S. Sihotra**, and D.Mehta, Proc. DAE Symposium Nucl. Phys. (2011)
22. *Small axially symmetric deformation for dipole bands in ^{112}In* ; T. Trivedi, R. Palit, J. Sethi, S. Saha, S. N. Mishra, B.S. Naidu, S. Jadhav, R. Donthi, S. M. Davane, S. Kumar, **S. Sihotra**, and D.Mehta, Proc. DAE Symposium Nucl. Phys. (2011).
23. Maximally spin aligned states in ^{96}Ru ; **S. Sihotra**, Jaspreet Kaur, S. Kumar, K. Singh, J. Goswamy, N. Singh, R. Palit, S. Muralithar, R. Kumar, R. P. Singh, R. K. Bhowmik, and D. Mehta, Proc. , CHASCON (2011) Panjab University Chandigarh.
24. High spin states in $^{98,99}\text{Rh}$, S. Kumar, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, CHASCON (2012) Panjab University Chandigarh.
25. **Band Structure in ^{96}Tc** , V. Pal Singh, S. Kumar, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, Proceedings of the DAE Symp. on Nucl. Phys. 57 (2012).
26. **Nuclear structure studies close to $Z \approx N \approx 50$** , S. Kumar, V. Pal Singh, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, N. Singh, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, R. Palit, and D. Mehta, DAE Symposium Proceedings in Nuclear Physics (2012), Delhi University.
27. **Nuclear structure studies close to $N = Z = 50$** , S. Kumar, **S. Sihotra**, Z. Naik, K. Singh, J. Goswamy, R. Palit, N. Singh, R. Kumar, R.P. Singh, S. Muralithar, R. Bhowmik, and D. Mehta, www.iuac.res.in/FIG12/full-papers/fig12_Final_S.Sihotra.pdf.
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54. **Multi particle excitation in ^{102}Cd** : S.Sihotra et al., DAE symposium on Nuclear Physics, 2021.
55. **Band structures in ^{100}Pd** : S.Sihotra et al., DAE symposium on Nuclear Physics, 2021.
56. **Shell model calculations in ^{96}Tc** : S.Sihotra et al., DAE symposium on Nuclear Physics, 2021.
57. **Shell model description of ^{90}Zr** : S.Sihotra et al., DAE symposium on Nuclear Physics, 2021.
58. **Chiral structur in ^{120}I** : S.Sihotra et al., DAE symposium on Nuclear Physics, 2021.
59. **Cross-talk estimation of the hybrid γ -ray detector array through GEANT4 simulation**: Biswajit Das, S. Saha, R. Palit, A. Kundu, P. Dey, V. Malik, S. K. Jadav , B. S. Naidu , A. T. Vazhappilly and S. Sihotra, Proceedings of the DAE Symp. on Nucl. Phys.

Invited Talks;

- ✚ Invited Talk on Nuclear Structure studies in $A \sim 100$ Mass regions in International workshop at TIFR, 2011.
- ✚ Invited Talk on Nuclear Structure studies in $A \sim 100$ and $A \sim 130$ Mass regions in DAE Nuclear Physics Symposium (2012)
- ✚ Invited Talk on Nuclear Structure studies in Mass 100 in International conference India-UK meet in Nuclear Physics at ISOLDE in PU, Chandigarh (2014).
- ✚ Invited talk on Nuclear structure studies in $N=Z=50$ Shell closure in National Conference on Emerging trends and Many body interaction at Jammu University, Jammu (2014).
- ✚ Invited talk on Fast timing measurements on National School cum Workshop in Accelerator Physics, PU, Chandigarh, March 15-18(2016).
- ✚ Invited talk on Nuclear structure studies in $N=Z=50$ Shell closure in INCP, PU, Chandigarh, March 15-18(2017).
- ✚ Invited Talk on Nuclear Structure studies in $A \sim 100$ Mass regions in International workshop at TIFR, 2018.
- ✚ Invited Talk on Nuclear Structure studies in the vicinity of in $N=Z=50$ Shell closure International workshop at CUHP 2021.
- ✚ Invited Talk on Nuclear Structure studies in the upper vicinity of in $N=Z=50$ Shell closure International workshop at IUAC 2021.