

Anukul Dhal

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PERSONAL DETAILS

Address: Gamma Driven Experiments Department,
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077125 Magurele, Jud. Ilfov, Romania.

Nationality: Indian
Gender: Male
Languages: English, Hindi, Odia, Bengali

EDUCATION

2002 – 2010	Ph.D.	Banaras Hindu University (BHU), Varanasi, India [in association with Inter University Accelerator Centre (IUAC), New Delhi]. (Thesis title: Study of high spin states in ^{139}Pm , ^{137}Pm and ^{78}Kr : Role of intruder orbitals)
1999 - 2001	M.Sc.	Utkal University, Bhubaneswar, Odisha, India. (Specialization: Particle Physics)
1996 – 1999	B.Sc.	Utkal University, Bhubaneswar, Odisha, India. (Physics Honours)

WORK EXPERIENCE

2024 – present	Research Scientist – III at ELI-NP, IFIN-HH, Magurele, Romania
2022 – 2024	Physicist at ELI-NP, IFIN-HH, Magurele, Romania
2018 – 2022	Postdoctoral Research Assistant at ELI-NP, IFIN-HH, Magurele, Romania
2017 – 2017	Visiting Scientist at Variable Energy Cyclotron Centre, Kolkata, India.
2015 – 2017	Postdoctoral Fellow at Variable Energy Cyclotron Centre, Kolkata, India.
2014 – 2014	Postdoctoral Fellow at Univ. of the Western Cape / iThemba Labs, South Africa.
2011 – 2014	Postdoctoral Fellow at Weizmann Institute of Science, Rehovot, Israel.
2010 – 2011	Research Associate at IUAC, New Delhi, India.
2009 – 2010	Project Assistant at IUAC, New Delhi, India.

RESEARCH AREAS

- ❖ In-beam gamma-ray spectroscopy: Mainly focuses on nuclear structure physics by gamma-ray spectroscopy techniques, utilizing heavy-ion as well as light-ion fusion evaporation reactions. Nuclear level lifetimes (ps range) were measured utilizing Doppler Shift Attenuation Method. Exotic nuclear phenomena like magnetic rotation, band termination, triaxiality etc. were studied.
- ❖ Nuclear Resonance Fluorescence technique, with a high brilliance gamma beam facility, for the detailed study of the nuclear structure and various phenomena associated with the nuclear excitations below the particle separation energy.
- ❖ Total Absorption Gamma-ray Spectroscopy (TAGS) measurements, for the decay spectroscopy of the neutron-rich ^{43}K has been performed. The β -feeding intensities as well as the half-life of ^{43}K were measured.
- ❖ Electrostatic ion beam trap (EIBT) for precision measurements of beta-neutrino correlation from ^6He decay using a unique method which incorporates a radioactive ion beam, ion trapping, ion bunching, and a radiation detection system.

HONOURS AND AWARDS

- ❖ SARChI (South African Research Chairs Initiative) Postdoctoral Fellowship – 2014, at the University of the Western Cape / iThemba Labs, Cape Town, South Africa.
- ❖ Feinberg Postdoctoral Fellowship – 2011, at Weizmann Institute of Science, Israel.
- ❖ Graduate Aptitude Test in Engineering (GATE)-2001 (76.20%ile), conducted by Indian Institute of Technology (IITD), Delhi, India.
- ❖ Joint Entrance Screening Test (JEST)-2002 (82.29%ile), conducted by Indian Institute of Astrophysics (IIAB), Bangalore, India.

STUDENTS SUPERVISION

Co-supervised students for the undermentioned summer training projects at Variable Energy Cyclotron Centre (VECC), Kolkata, during the academic year 2015 and 2016

- ❖ Timing and energy measurements using HPGe and BaF₂ detectors.
- ❖ Energy and efficiency calibration and measurements of room background using an HPGe detector.
- ❖ β -feeding intensity measurement of ^{207}Po nucleus by γ -ray spectroscopy method.
- ❖ Measurement of half-life of ^{207}Po nucleus using γ -ray spectroscopy method.

PROPOSED EXPERIMENTS

- 2022 *Lifetime measurement of octupole phonon states in $N = 85$ Promethium nucleus* utilizing the RoSPHERE facility at IFIN-HH, Romania.
Spokesperson: **A. Dhal**, ELI-NP, IFIN-HH, Romania
- 2016 *Nuclear structure study around $Z \sim 90$ and $N \sim 126$ (isomer study and prompt spectroscopy in odd-even ^{207}Fr and odd-odd ^{216}Ac)* utilizing the Indian National Gamma Array (INGA) and the HYbrid Recoil mass Analyzer (HYRA) facilities at IUAC, New Delhi, India.
Spokesperson: **A. Dhal**, VECC, Kolkata, India
- 2016 *Gamma-ray spectroscopy of ^{187}Os : Role of high- j intruder orbitals* utilizing the clover detectors array and the K-150 cyclotron facility at VECC.
Spokesperson: **A. Dhal**, VECC, Kolkata, India
- 2010 *Search for tetrahedral symmetry in $^{156, 158}\text{Dy}$* utilizing the INGA facility at Tata Institute of Fundamental Research (TIFR), Mumbai.
Spokesperson: **A. Dhal**, IUAC, New Delhi, India
- 2010 *Search for triaxial superdeformation in odd-odd ^{160}Lu* utilizing the INGA facility at TIFR, Mumbai.
Spokesperson: **A. Dhal**, IUAC, New Delhi, India
- 2009 *Search for highly deformed band structure in $A \sim 130$ mass region: case of ^{135}Pm* utilizing the INGA facility at IUAC, New Delhi / TIFR, Mumbai
Spokesperson: **A. Dhal**, BHU, Varanasi, India
- 2007 *Study of exotic nuclear shapes at high spin in ^{137}Pm* utilizing the INGA facility at IUAC, New Delhi.
Spokesperson: **A. Dhal**, BHU, Varanasi, India
- 2006 *Nuclear structure study of ^{137}Pm at high spin* utilizing the INGA facility and K-150 cyclotron at VECC, Kolkata.
Spokesperson: **A. Dhal**, BHU, Varanasi, India
- 2003 *Nuclear structure study of nuclei in $A \sim 130$ region: case of $^{137, 139}\text{Pm}$* (Thesis proposal) utilizing the INGA / GDA facilities at IUAC, New Delhi.
Spokesperson: **A. Dhal**, BHU, Varanasi, India

COMPUTATIONAL SKILLS

- ❖ Nuclear Experimental Data Analysis codes: RADWARE, LINESHAPE and the in-house developed codes like INGASORT & CANDLE
- ❖ Programing languages: Fortran 77
- ❖ Graphics/Others: ORIGIN, LATEX, MATLAB, MS Office, LISE++, SRIM, XMGRACE
- ❖ Operating Systems: Linux (Ubuntu, Fedora & Redhat) and Windows

TECHNICAL SKILLS

Experimental:

- ❖ Working with multi-detectors array ELIADE (ELI-NP Array of DEtectors) at ELI-NP, Romania, consists of eight HPGe clover detectors (4x60x90 Seg32 type) and four large volume CeBr₃ detectors.
- ❖ Worked with multi-detectors array INGA-I & III (Indian National Gamma Array, Phase-I and III) at IUAC, New Delhi, India, consisting of eight and eighteen HPGe clover detectors (4x50x70 type).
- ❖ Worked with multi-detectors array GDA (Gamma Detectors Array) at IUAC, New Delhi, India, consisting of twelve HPGe detectors and 14 BGO detectors as multiplicity filter.
- ❖ Designed and built an annealing station at ELI-NP for the annealing of the HPGe clover detectors (4x60x90 Seg32 type) and successfully completed the annealing of eight such detectors belong to ELIADE array.
- ❖ Designed and built a cooling station at ELI-NP for the cooling (by liquid nitrogen) of the eight HPGe clover detectors corresponding to the ELIADE setup, along with being a part of the control & monitoring system development of the cooling system. The system is working successfully.
- ❖ Worked on Total Absorption γ -ray Spectroscopy (TAGS) facility at VECC (Variable Energy Cyclotron Center, Kolkata, India), a modular setup consists of 50 elements of BaF₂ detectors (5x3.5x3.5 cm³) in a 4 π geometry.
- ❖ Working on Nuclear instrumentation and the associated data acquisition system for large detectors arrays.
- ❖ Work experience on Electrostatic Ion Beam Trap (EIBT) at WIS (Weizmann Institute of Science, Israel).
- ❖ Worked and prepared various targets for nuclear physics experiments by resistive evaporation technique as well as using the rolling mill.
- ❖ Experience on working with various high- and ultra-high vacuum systems.
- ❖ Basic knowledge on working of Pelletron and Cyclotron ion accelerators.

Theoretical:

- ❖ Experience on Total Routhian Surface (TRS) Calculations based on cranked shell model with Woods-Saxon potential.
- ❖ Experience on Cranked Shell Model (CSM) calculations for single-particle Routhians

CONFERENCE / WORKSHOP / SCHOOL PRESENTATIONS

1. ELIADe: A state-of-the-art facility for probing nuclear structure by NRF process (Oral presentation, movie category)

A. Dhal, G. Suliman, C.A. Ur, D. Balabanski, S. Ilie, C. Petcu, D. Testov, N. Pietralla and A. Zilges

The third International Conference on Nuclear Photonics (NP2020), Japan, June 7th - 11th, 2021 (online mode)

2. ELIADe facility for NRF studies: Present status (Oral presentation)

A. Dhal

First user workshop of ELI-NP, ELI_NP, Romania, October 7th - 9th, 2019

3. ELIADe: A state-of-the-art facility for NRF studies (Oral presentation)

A. Dhal

IFIN-HH | ILL collaboration workshop, IFIN-HH, Romania, April 3rd - 5th, 2019

4. Installation of NRF set-up at ELI-NP (Oral presentation)

A. Dhal

Young Researcher's Day of ELI-NP, ELI_NP, Romania, November 28th - 29th, 2018

5. Nuclear shape evolution near Z = 82 (Poster presentation)

A. Dhal and G. Mukherjee

DAE-BRNS Symposium on Nuclear Physics, Patiala, India, December 20th – 24th, 2017

6. Onset of triaxiality in Dy nuclei around N = 88 - 92 (Poster presentation)

A. Dhal and G. Mukherjee

DAE-BRNS Symposium on Nuclear Physics, Patiala, India, December 20th – 24th, 2017

7. Decay measurements of $^{43}\text{K}(\beta^-)^{43}\text{Ca}$ by HRS and TAS (Oral and Poster presentations)

A. Dhal, G. Mukherjee, M. Bhattacharjee, V. Naik, S. Mukhopadhyay, D. Pandit, S. Pal, D. Mondal, P. Karmakar, T. Roy, Md.A. Asgar, Soumik Bhattacharya, S. Bhattacharyya, C. Bhattacharya, S.R. Banerjee, and A. Chakrabarti

International Conference on Nuclear Data for Science and Technology (ND2016), Bruges, Belgium; September 11th – 16th, 2016.

8. Half-life and β -feeding measurements of ^{207}Po by γ -spectroscopy method (Poster presentation)

A. Dhal, R. Ghosh, A.G. Nair, G. Mukherjee, Md.A. Asgar, T. Roy, T.K. Rana, T.K. Ghosh, K. Banerjee, S. Kundu, R. Pandey, Pratap Roy, S. Manna, A. Sen, A. Dey, J.K. Meena, J.K. Sahoo, A.K. Saha, R. Banik, Soumik Bhattacharya, A. Saha, S.S. Alam, D. Mondal, D. Pandit, S. Mukhopadhyay, S. Pal, T. Bhattacharjee, S. Bhattacharyya, C. Bhattacharya and S.R. Banerjee

DAE-BRNS Symp. on Nuclear Physics, Kolkata, India, December 5 -9, 2016

9. Decay Study of Neutron-rich ^{43}K using Total Absorption (TAGS) and High Resolution (HRGS) Gamma Spectroscopy Methods (Oral presentation)

A. Dhal, G. Mukherjee, M. Bhattacharjee, V. Naik, S. Mukhopadhyay, D. Pandit, S. Pal, D. Mondal, P. Karmakar, T. Roy, Md.A. Asgar, Soumik Bhattacharya, S. Bhattacharyya, C. Bhattacharya, S.R. Banerjee and A. Chakrabarti

DAE-BRNS Symp. on Nuclear Physics, Kolkata, India, December 5 -9, 2016

10. Probing fundamental interaction by an Electrostatic Ion Beam Trap (Oral presentation)

A. Dhal, S. Vaintraub, T. Trivedi, O. Aviv, T. Hirsh, M.L. Rappaport, D. Melnik, O. Heber, D. Schwalm, D. Zajfman, K. Blaum, M. Hass

Zakopane Conference on Nuclear Physics, Zakopane, Poland, Aug 27- Sept. 2, 2012

11. Nuclear structure at high spin in ^{137}Pm (Poster presentation)

A. Dhal, R.K. Sinha, D. Negi, T. Trivedi, M.K. Raju, D. Choudhury, G. Mohanto, S. Kumar, R. Kumar, S.S. Ghugre, R.P. Singh, J.J. Das, S. Muralithar, J.B. Gupta, A.K. Sinha, A.K. Jain, I.M. Govil, R.K. Bhowmik, S.C. Pancholi and L. Chaturvedi

International conference on Nuclear Structure 2010 (NS2010), University of California Berkeley, California, USA, Aug.8 – 13, 2010

12. Shape behaviour at high spin in ^{137}Pm (Poster presentation)

A. Dhal, R.K. Sinha, D. Negi, T. Trivedi, M.K. Raju, D. Choudhury, G. Mohanto, S. Kumar, R. Kumar, S.S. Ghugre, R.P. Singh, J.J. Das, S. Muralithar, J.B. Gupta, A.K. Sinha, A.K. Jain, I.M. Govil, R.K. Bhowmik, S.C. Pancholi and L. Chaturvedi

DAE-BRNS International Symp. on Nuclear Physics, BARC, Mumbai, India, Dec. 8 – 12, 2009

13. Study of high spin states: Role of intruder orbitals (Invited Talk)

A. Dhal

School-cum-Workshop on ‘Nuclear Yrast and Near-Yrast Spectroscopy’ at IIT Roorkee, India, October 26-30, 2009

14. High spin states in ^{137}Pm (Oral presentation)

A. Dhal, R.K. Sinha, D. Negi, T. Trivedi, M.K. Raju, D. Choudhury, G. Mohanto, S. Kumar, R. Kumar, S.S. Ghugre, R.P. Singh, J.J. Das, S. Muralithar, J.B. Gupta, A.K. Sinha, A.K. Jain, I.M. Govil, R.K. Bhowmik, S.C. Pancholi and L. Chaturvedi

DAE-BRNS Symp. on Nuclear Physics, IIT Roorkee, India, Dec. 22 – 26, 2008

15. High spin states in ^{139}Pm (Oral presentation)

A. Dhal, R.K. Sinha, Monika, P. Agarwal, S. Kumar, Rakesh Kumar, A. Chakraborty, S. Mukhopadhyay, Rajesh Kumar, R.P. Singh, S. Muralithar, R.K. Bhowmik, I.M. Govil, J.B. Gupta, A.K. Jain, S.C. Pancholi and L. Chaturvedi

Fourth International Conference on Fission and Properties of Neutron-Rich Nuclei, Sanibel Island, Florida, USA. Nov. 11 - 17, 2007.

16. High spin states in ^{139}Pm (Poster presentation)

A. Dhal, Rishi Kumar Sinha, Priyanka Agarwal, Suresh Kumar, Monika, Rajesh Kumar, Anagha Chakraborty, SomSunder Mukhopadhyay, Rakesh Kumar, R.P. Singh, S. Muralithar, R.K. Bhowmik, I.M. Govil, J.B. Gupta, A.K. Jain, S.C. Pancholi, and L. Chaturvedi

DAE-BRNS Symposium on Nuclear Physics, India., (2006)

17. Isotopic Tellurium target preparation by vacuum deposition (Poster presentation)

A. Dhal, Rishi Kumar Sinha, Abhilash S R and D Kabiraj

DAE-BRNS Symposium on Nuclear Physics, Vadadora, India, Dec. 11 – 15, 2006

18. Lifetime measurements in ^{139}Pm (Poster presentation)

A. Dhal, R. K. Sinha, P. Agarwal, S. Kumar, Monika, R. Kumar, A. Chakraborty, S. Mukhopadhyay, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, I.M.Govil, J. B. Gupta, A. K. Jain, S. C. Pancholi and L.Chaturvedi

DAE-BRNS Symposium on Nuclear Physics, BARC, Mumbai, India, Dec. 12 – 15, 2005

19. High spin states in ^{139}Pm (Poster presentation)

A. Dhal, Rishi Kumar Sinha, Priyanka Agarwal, Suresh Kumar, Monika, Rajesh Kumar, Anagha Chakraborty, SomSunder Mukhopadhyay, Rakesh Kumar, R.P. Singh, S. Muralithar, R.K. Bhowmik, I.M. Govil, J.B. Gupta, A.K. Jain, S.C. Pancholi, P.K. Joshi and L. Chaturvedi

International workshop on Nuclear Structure Physics at the Extremes: New Directions (NUSPE 05), Himachal Pradesh Univ., Shimla, India, March 21 - 24, 2005

20. Shape changes at high spin in ^{78}Kr (Oral presentation)

A. Dhal, Rishi Kumar Sinha, Priyanka Agarwal, Suresh Kumar, Monika, Bir Bikram Singh, Rajesh Kumar, P. Bringel, A. Neusser, Rakesh Kumar, K.S. Golda, R.P. Singh, S. Muralithar, N. Madhavan, J.J. Das, K.S. Thind, A.K. Sinha, I.M. Govil, R.K. Bhowmik, P. K. Joshi, A.K. Jain, S.C. Pancholi and L. Chaturvedi

DAE-BRNS Symposium on Nuclear Physics, BHU, Varanasi, India, Dec. 6 – 10, 2004

21. High spin structure in ^{78}Kr (Poster presentation)

A. Dhal, Rishi Kumar Sinha, Priyanka Agarwal, Suresh Kumar, Monika, Bir Bikram Singh, Rajesh Kumar, P. Bringel, A. Neusser, Rakesh Kumar, K.S. Golda, R.P. Singh, S. Muralithar, N. Madhavan, J.J. Das, K.S. Thind, A.K. Sinha, I.M. Govil, R.K. Bhowmik, A.K. Jain, S.C. Pancholi and L. Chaturvedi
DAE-BRNS Symposium on Nuclear Physics, BARC, Mumbai, India, Dec. 8 – 12, 2003

REFEREED JOURNAL PUBLICATIONS

1. The annealing setup and associated monitoring system of the ELIADE HPGe clover detectors at ELI-NP

A. Dhal, D. Testov, F. Ramirez, S. Aogaki, G. Turturica, G. Suliman, C. Petcu, B. Tatulea, C.A. Ur and D.L. Balabanski

JINST 18 P11024 (2023)

DOI: <https://doi.org/10.1088/1748-0221/18/11/P11024>

2. Liquid nitrogen cooling, control and monitoring system for the ELIADE HPGe clover detectors at ELI-NP

A. Dhal, F. Ramirez, G. Suliman, T. Roman, G. Ciocan, D. Testov, C. Petcu, B. Tatulea, C.A. Ur and D.L. Balabanski

JINST 17 T07008 (2022)

DOI: <https://doi.org/10.1088/1748-0221/17/07/T07008>

3. Decay measurements of $^{43}\text{K}(\beta^-)^{43}\text{Ca}$ by HRS and TAS

A. Dhal, G. Mukherjee, M. Bhattacharjee, V. Naik, S. Mukhopadhyay, D. Pandit, S. Pal, D. Mondal, P. Karmakar, T. Roy, Md.A. Asgar, Soumik Bhattacharya, S. Bhattacharyya, C. Bhattacharya, S.R. Banerjee, and A. Chakrabarti.

EPJ Web of Conferences **146**, 10013 (2017)

DOI: <https://doi.org/10.1051/epjconf/201714610013>

4. Probing fundamental interactions by an Electrostatic ion beam trap (EIBT)

A. Dhal, S. Vaintraub, T. Trivedi, O. Aviv, T. Hirsh, M.L. Rappaport, D. Melnik, O. Heber, D. Schwalm, D. Zajfman, K. Blaum, M. Hass.

Acta. Physica Pol. **B 44**, 647 (2013)

DOI: <https://doi.org/10.5506/APhysPolB.44.647>

5. Shape evolution in odd-A ^{137}Pm

A. Dhal, R. K. Sinha, D. Negi, T. Trivedi, M.K. Raju, D. Choudhury, G. Mohanto, S. Kumar, J. Gehlot, R. Kumar, S. Nath, S.S. Ghugre, R.P. Singh, J.J. Das, S. Muralithar, N. Madhavan, J.B. Gupta, A.K. Sinha, A.K. Jain, I.M. Govil, R.K. Bhowmik, S.C. Pancholi, and L. Chaturvedi.

Eur. Phys. J. A **48**, 28 (2012)

DOI: <https://doi.org/10.1140/epja/i2012-12028-3>

6. High spin states in ^{139}Pm

A. Dhal, R. K. Sinha, L. Chaturvedi, P. Agarwal, S. Kumar, A. K. Jain, R. Kumar, I. M. Govil, S. Mukhopadhyay, A. Chakraborty, Krishichayan, S. Ray, S. S. Ghugre, A. K. Sinha, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, S.C. Pancholi, J.B. Gupta.

Phys. Rev. C **80**, 014320 (2009)

DOI: <https://doi.org/10.1103/PhysRevC.80.014320>

7. Shape changes at high spin in ^{78}Kr

A. Dhal, R. K. Sinha, P. Agarwal, S. Kumar, Monika, B. B. Singh, R. Kumar, P. Bringel, A. Neusser, R. Kumar, K. S. Golda, R. P. Singh, S. Muralithar, N. Madhavan, J. J. Das, A. Shukla, P. K. Raina, K. S. Thind, A. K. Sinha, I. M. Govil, P. K. Joshi, R. K. Bhowmik, A. K. Jain, S. C. Pancholi and L. Chaturvedi.

Eur. Phys. J. A **27**, 33-36 (2006)

DOI: <https://doi.org/10.1140/epja/i2005-10230-0>

8. High-spin level structure of ^{209}Rn

Sneha Das, S. Bhattacharyya, Soumik Bhattacharya, S. Chakraborty, Sakshi Shukla, Praveen C. Srivastava, R. Banik, S. Nandi, G. Mukherjee, Indu Bala, S. S. Bhattacharjee, S. Das Gupta, **A. Dhal**, Debasish Mondal, S. Muralithar, R. Raut, A. Sharma, R. P. Singh, and V. Srivastava.

Phys. Rev. C **109**, 014322 (2024)

DOI: <https://doi.org/10.1103/PhysRevC.109.014322>

9. Status of the ELIADe γ -ray spectrometer for NRF experiments at ELI-NP

D. A. Testov, **A. Dhal**, C. Petcu, S. Aogaki, D. L. Balabanski, M. Brezeanu, V. Lelasseux, R. Miron, O. Morris, F. Ramirez, G. Suliman, C. Teacu, G. Turturica, C. Ur, F. Zhu.

IL Nuovo Cimento **47 C**, 60 (2024)

DOI: <https://doi.org/10.1393/ncc/i2024-24060-9>

10. Extra yield in hot Ni isotopes below the Giant Dipole Resonance

O. Wieland, A. Bracco, F. Camera, S. Aogaki, D. L. Balabanski, E. Boicu, R. Borcea, M. Boromiza, I. Burducea, Ș. Calinescu, A. Coman, P. Constantin, C. Costache, M. Ciemala, Gh. Ciocan, C. Clisu, F. C. L. Crespi, M. Cuciuc, **A. Dhal**, N. Djourelou, N. M. Florea, I. Gheorghe, A. Giaz, D. Iancu, D. M. Kahl, M. Kmiecik, A. Kuşoğlu, R. Lica, N. Mvarginean, A. Maj, R. Marginean, C. Mihai, R. E. Mihai, B. Million, C. Neacsu, D. Nichita, C. Nițva, H. Pai, A. Pappalardo, T. Petruse, A. Rotaru, A. B. Serban, P.-A. Söderström, C. O. Sotty, L. Stan, A. N. State, I. Stiru, A. Stoica, D. A. Testov, S. Toma, T. Tozar, A. Turturică, G. V. Turturică, S. Ujeniuc, V. Vasilca, Y. Xu.

IL Nuovo Cimento **47 C**, 24 (2024)

DOI: <https://doi.org/10.1393/ncc/i2024-24024-1>

11. Impact of ^{13}C contamination on neutron yield measurement in the $^{27}\text{Al}(\alpha, n)$ Reaction

Rajat Roy, D. Choudhury, D. A. Testov, D. L. Balabanski, A. Kusoglu, G. Lorusso, P. -A. Söderström, S. Aogaki, S. -R. Ban, M. Brezeanu, I. Burducea, R. Corbu, M. Cuciuc, **A. Dhal**, N. Djourelou, N. Florea, A. Gavrilesco, C. Gheorghiu, G. L. Guardo, D. Iancu, V. Lelasseux, C. V. Nedelcu, H. Pai, P. Parlea, T. Petruse, A. Rotaru, S. Singh, A. N. State, M. Straticiu, V. Toma, and T. Tozar.

EPJ Web of Conferences **297**, 02007 (2024)

DOI: <https://doi.org/10.1051/epjconf/202429702007>

12. Improved half-lives of 8^+ and 11^- isomeric states in ^{202}Po

Sahab Singh, D Choudhury, R. Roy, B. Maheshwari, R. Palit, P. Dey, B. Das, A. Kundu, Md.S.R. Laskar, D. Negi, B.S. Naidu, S. Jadhav, A.V. Thomas, **A. Dhal**, S. Nag, N. Goel.

Acta. Physica Pol. B Proceedings Supplement, Vol. **17**, No. 3, A10 (2024)

DOI: <https://doi.org/10.5506/APhysPolBSupp.17.3-A10>

13. Design and construction of a 9 MeV γ -ray source based on capture of moderated plutonium-beryllium neutrons in nickel

P.-A. Söderström, D.L. Balabanski, R.S. Ban, Gh. Ciocan, M. Cuciuc, **A. Dhal**, V. Fugaru, V. Iancu, A. Rotaru, A.B. Șerban, A. State, D. Testov, G.V. Turturică, V. Vasilca

Applied Radiation and Isotopes **191**, 110559 (2023)

DOI: <https://doi.org/10.1016/j.apradiso.2022.110559>

14. Different manifestations of triaxial shapes of the positive and negative parity bands in ^{187}Os

S. Nandi, G. Mukherjee, **A. Dhal**, R. Banik, Soumik Bhattacharya, S. Basu, Shabir Dar, S. Bhattacharyya, C. Bhattacharya, S. Kundu, D. Paul, S. Rajbanshi, S. Chatterjee, S. Das, S. Samanta, R. Raut, S.S. Ghugre, H. Pai, Sajad Ali, S. Biswas, and A. Goswami

Phys. Rev. C **105**, 034336 (2022)

DOI: <https://doi.org/10.1103/PhysRevC.105.034336>

15. Magnetic rotational band in ^{116}Sb

Shabir Dar, Soumik Bhattacharya, S. Bhattacharyya, R. Banik, S. Nandi, G. Mukherjee, S. Rajbanshi, S. Das Gupta, Sajad Ali, S. Chakraborty, S. Chatterjee, S. Das, **A. Dhal**, S.S. Ghugre, A. Goswami, D. Mondal, S. Mukhopadhyay, H. Pai, S. Pal, D. Pandit, R. Raut, P. Ray, S. Samanta

Nucl. Phys. A **1019**, 122382 (2022)

DOI: <https://doi.org/10.1016/j.nuclphysa.2022.122382>

16. Collective Structures in ^{116}Sb

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59. Lifetime measurements of microsecond isomers in the $N = 48$ nuclei ^{88}Zr and ^{90}Mo using recoil-isomer tagging

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