Dr. Vishal Srivastava

Date Of Birth	1^{st} January, 1985
Designation / Present Position	Dr. D. S. Kothari Postdoctoral Fellow at Department of Physics, Panjab university, Chandigarh, India.
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Email Id	vis.vip22@gmail.com vishal.vecc@gmail.com
	Cell-1: +91-8800987136 Cell-2: +91-8334961843
Personal Details	**Father's Name** : Late Ashok Kumar Srivastava, **Mother's Name** : Kunj Lata Srivastava **Nationality** : Indian, **Religion:** Hinduism, **Sex:** Male, **Marital Status :** Married **Permanent Address**: House No. 628, Avas Vikas Colony , District- Basti, Pin-272001, Uttar Pradesh, India.

Research Experience

1. Dr. D. S. Kothari Postdoctoral Fellow at Department of Physics, Panjab University, Chandigarh, India (From 7^{st} December, 2020 to present).
2. Post-doctoral Research Fellow at Racah Institute of Physics, Hebrew University of Jerusalem, Israel (From 21^{st} December, 2018 to 30^{th}November 2020).
3. Post-doctoral Research Associate-2 at Saha Institute of Nuclear Physics, Kolkata, India (From 8^{th} June, 2018 to 30^{th} Nov. 2018).
4. Post-doctoral Research Associate at Inter University Accelerator Centre, New Delhi, India (From 18^{th} April, 2016 to 17^{th} April, 2018).

International Fellowship: INFN Postdoctoral Fellowship in Experimental Physics (2020-21) (Not yet joined).

National Scholarships: JEST 2010 (DAE) and DSKPDF (UGC).

Educational Details

1. **Ph.D. in Physics (Experimental Nuclear Physics),** **Year: 2016**.
   Institution: Variable Energy Cyclotron Centre, Kolkata, India.
   University: Homi Bhabha National Institute, mumbai, India.
2. **Master of Science (M.Sc.) in Physics.** **Year: 2006**.
   University: Dr. Ram Manohar Lohia Avadh University, Faizabad, U.P., India.
3. **Bachelor of Science (B.Sc.) in Physics & Mathematics.** **Year: 2003**.
   University: Deen Dayal Upadhyay Gorakhpur University, Gorakhpur, U.P., India.

Dissertation/ Thesis Title: **Study of Deuteron Induced Transfer Reactions on ^{27}Al**
Link: `http://www.hbni.ac.in/students/dsp_ths.html?nm=phys/PHYS04201004005.pdf`.

National Examinations: CSIR-NET For Lectureship, JEST 2008, JEST 2010 , GATE 2009, GATE 2010, GATE 2011.

Important Links

https://orcid.org/0000-0003-2694-4635 .
Google Scholar: Link: https://scholar.google.com/citations?user=Lh7F79wAAAAJhl=en.
Research Gate: Link:https://www.researchgate.net/profile/Vishal-Srivastava-17

Research Interest

- Nuclear Reactions and Structure :
  Optical Model, Transfer Reaction, Charge Particle Spectroscopy, Clustering in Nuclei, and Fusion-Fission Dynamics.
- Study of weak interaction (β-ν co-relation study from the trapped radioactive ions and their β- decays.
- Nuclear Astrophysics
- Facility Development for Nuclear Physics Research

Ongoing Research

- Presently, I am running my own research project titled "Spectroscopy of ^{26}Al and ^{8}Be using single nucleon transfer reaction. List of accepted experimental proposals related to the present proposal could be found as follows;
  Accepted Proposals:
  (1) Spectroscopy of ^{26}Al using the reaction ^{27}Al(^{6}Li,^{7}Li)^{26}Al.(Experimental Proposal has been accepted at IUAC, New Delhi, India). **(2)** Spectroscopy of ^{8}Be using ^{14}N and ^{16}O beams.(Experimental Proposal has been accepted at VECC, Kolkata, India).
- Study of the spectroscopic factors for the states of the nuclei ^{26}Al, ^{26}Mg and ^{25}Al using the reaction channels (d, t), (d, ^{3}He) and (d, ^{4}He), respectively. Apart from this, I am also doing systematic study of the optical model potentials parameters for the d + ^{27}Al) and (^{4}He + ^{27}Al and ^{28}Si) systems.
- Study of different reaction channels obtained using the reactions ^{12}C + ^{12,13}C.

Work Experience

Computer Skills

- **ROOT platform for Data analysis.**
- **Theoretical Codes:** ECIS94, DWUCK4, DWUCK5 and FRESCO.
  I used **ECIS94** code for the analysis of elastic scattering data. To analyse the transfer part, I used the zero range distorted wave Born approximation code **DWUCK4** and finite range distorted wave Born approximation code **DWUCK5**. Presently, I am doing transfer and coupled channel calculations using the code **FRESCO**.
- **Graph Plotting:** GNU Plot, Grace, Origin, Sigma-Plot.

Detectors and Electronics handling :

I have practical experience in handling of Si surface barrier, Si strip and CsI(Tl) detectors as I have used these detectors for making detector telescope for my own experiment. In addition, I have also handled various other types of detectors, such as plastic phoswich, liquid scintillation based neutron ToF detector and HPGe gamma detectors. I have good exposure of NIM, CAMAC and VME based readout and data acquisition systems, which I used during my experiments. I have used ROOT platform for the analysis of the nuclear reaction data during my thesis work.

Experience in Physics work

(I) Experience in Physics work during the course of PhD:

- Optical Model, Transfer Reactions and Single Particle Spectroscopy:
  Works done in this section are basically my thesis work and can be found in brief from the brief report on my thesis work.

- Study of the Hoyle State:
  The motivation of this experiment was to study the decay mechanism of the Hoyle state using kinematically complete measurement.
- Study of the cluster correlation in nuclei:
  The motive of this experiment was to study the survival and sustained influence of cluster correlations on dissipative binary decay of hot composites $^{24,25}Mg^{\star}$.
- Study of the shell effect in fission:
  Major aim of this work is to study shell effect in the fission using fission fragment mass distribution as probe.
- Study of the nuclear level density:
  In these experiments, neutron emission from the compound nuclei $^{201}Tl^{\star}$, $^{185}Re^{\star}$, $^{169}Tm^{\star}$, $^{97}Tc^{\star}$ and $^{62}Zn^{\star}$ were studied to extract angular momentum and collectivity dependence of the nuclear level density in the A≈170-200 region.
- Study of multi-fragmentation:
  The motivation of this is to study complex fragment emission from the decay of fully energy-relaxed composite, $^{44}Ti^{\star}$ formed via the $^{32}S + ^{12}C$ reaction.

Details about these studies can be found in their respective publications given in the **List of Publications**.

(II) Post-Doctoral Research Experience:

(1) During my first Postdoctoral Research Associate tenure (April 2016 - April 2018) at IUAC, New Delhi, India, I got good exposure of working in experiments using Mass Spectrometers (Heavy Ion Reaction Analyzer (HIRA) and HYbrid Recoil mass Analyzer (HYRA)) facilities available at IUAC New Delhi, India. I also get my another experimental proposal accepted to study the nucleus 26Al using the reaction 27Al(6Li, 7Li)26Al. Apart from these, I got good exposure of working with heavy ion induced reaction dynamics studies particularly, evaporation residue and complete-incomplete fusion studies during the said tenure and now I am comfortable with these studies.

(2) During my second short Postdoctoral Research Associate-2 tenure (June 2018 - Nov. 2018) at SINP, Kolkata, India, I did multi-nucleon transfer reaction studies and performed transfer cross section calculations using the compute code FRESCO. I also get my another experimental proposal accepted at Variable Energy Cyclotron Crentre, Kolkata, India, to study Spectroscopy of ^{8}Be using ^{14}N and ^{16}O beams.

(3) During my Postdoctoral tenure in Israel, I was involved in the study of the nuclear β-decay from the trapped radioactive atoms and ions using the electrostatic-ion-beam trap (EBIT) facility available at Soreq Applied Research Accelerator Facility (SARAF), Israel. In particular, I was doing $\beta - \nu$ co-relation study from the study of the trapped ^{6}He ions and its decay, which is an excellent tool to probe the physics beyond standard model.

List of Publications

Publication in Peer Reviewed Journals

1. *Complex fragment emission in dissipative binary decay of* $^{74,76}Kr$:
   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 **Phys. Rev. C 103, 034614 (2021)** .

2. *Evaporation-residue-gated spin distribution measurements of the highly fissile compound nucleus* $^{224}Th^{\star}$ *through* $^{16}O+$ ^{208}Pb *and* $^{18}O+$ ^{206}Pb *reactions*:
   M. M. Hosamani, N. M. Badiger, N. Madhavan, I. Mazumdar, S. Nath, J. Gehlot, A. K. Sinha, S. M. Patel, P. B. Chavan,T. Varughese, **Vishal Srivastava**, Md. Moin Shaikh, P. Sandya Devi, P. V. Laveen, A. Shamlath, M. Shareef, S. K. Duggi, P. V. Madhusudhana Rao, G. Naga Jyothi, A. Tejaswi, P. N. Patil, A. Vinayak, K. K. Rajesh, Abhishek Yadav, A. Parihari, Rohan Biswas, Monalisha Dhibar, D. P. Kaur, M. Ratna Raju, and J. Joseph. **Phys. Rev. C 101, 014616 (2020)**.

3. *Measurement of fusion evaporation residue cross sections in the* ^{48}Ti + ^{138}Ba *reaction* :
   K. K. Rajesh, M. M. Musthafa, N. Madhavan, S. Nath, J. Gehlot, Jhilam Sadhukhan, P. Mohamed Aslam, P. T. Muhammed shan, E. Prasad, M. M. Hosamani, T. Varughese, Abhishek Yadav, Vijay R. Sharma, **Vishal Srivastava**, Md. Moin Shaikh, M. Shareef, A. Shamlath, and P. V. Laveen. **Phys. Rev. C 100, 044611 (2019)**.

4. *New high precision study on the decay width of the Hoyle state in* ^{12}C :
   T. K. Ranaa, S. Bhattacharyaa, C. Bhattacharyaa, S. Mannaa, Samir Kundua, K. Banerjeea, R. Pandeya, Pratap Roy, A. Dhal, G. Mukherjee, **V. Srivastava**, A. Dey, A. Chaudhuri, T. K. Ghosha, A. Sen, Md. A. Asgar, T. Roy, J. K. Sahoo, J. K. Meena, A. K. Saha, R. M. Saha, M. Sinha, AmitRoy. **Phys. Lett. B 793 (2019) 130 - 133**.

5. *Sub-barrier fusion in the* ^{37}Cl + ^{130}Te *system* :
   Rudra N. Sahoo, Malika Kaushik, Arshiya Sood, Pawan Kumar, Arzoo Sharma, Swati Thakur, Pushpendra P. Singh, P. K. Raina, Md. Moin Shaikh, Rohan Biswas, Abhishek Yadav, J. Gehlot, S. Nath, N. Madhavan, **V Srivastava**, Manoj K. Sharma, B. P. Singh, R. Prasad, Anjali Rani, A. Banerjee, Unnati Gupta, Nabendu K. Deb, and B. J. Roy **Phys. Rev. C 99, 024607 (2019)**.

6. *Study of* ^{26}Mg *through 1p pick up reaction* $^{27}Al(d, {}^{3}He)$:
   Vishal Srivastava, C. Bhattacharya, T. K.Rana, S. Manna, S. Kundu, S. Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T.K. Ghosh, J.K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. Saha A. Dey, Md. A. Asgar, Subinit. Roy, and Md. M. Shaikh. **International Journal of Modern Physics E 26, 1750064 (2017)**.

7. *Effect of clustering on the emission of light charged particles*:
   Samir Kundu, C. Bhattacharya, T.K. Rana, S. Bhattacharya, R. Pandey, K. Banerjee, Pratap Roy, J.K. Meena, G. Mukherjee, T.K. Ghosh, S. Mukhopadhyay, A.K. Saha, J.K. Sahoo, R. Mandal Saha, **V. Srivastava**, M. Sinha, and Md.A. Asgar. **Eur. Phys. J. A (2018) 54: 63**.

8. *Experimental investigation of* $T = 1$ *analog states of* ^{26}Al *and* ^{26}Mg:
   Vishal Srivastava, C. Bhattacharya, T.K.Rana, S.Manna, S. Kundu, S.Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J. K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. Saha, A. Dey, Md. A. Asgar, Subinit. Roy, and Md. M. Shaikh. **Phys. Rev. C 93, 044601 (2016)**.

9. *Experimental study of* ^{26}Al *through the 1n pick up reaction* $^{27}(d, t)$:
   Vishal Srivastava, C. Bhattacharya, T. K. Rana, S.Manna, S. Kundu, S.Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J. K. Meena, T. Roy, A. Chaudhuri,

M. Sinha, A. Saha, A. Dey, Md. A. Asgar, Subinit. Roy, and Md. M. Shaikh. **Phys. Rev. C 91, 054611 (2015)**.

10. *Excited states of ^{26}Al studied via the reaction $^{27}Al(d, t)$*:
Vishal Srivastava, C. Bhattacharya, T. K. Rana, S. Manna, S. Kundu, S. Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J.K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. K. Saha, Md. A. Asgar, A. Dey, Subinit Roy, and Md. Moin Shaikh. **EPJ Web of Conferences 117, 07022 (2016)**.

11. *Structure of ^{26}Al studied by one -nucleon transfer reaction $^{27}Al(d,t)$*:
Vishal Srivastava, C. Bhattacharya, T. K. Rana, S. Manna, S. Kundu, S.Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J. K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. K. Saha, A. Dey, Md. A. Asgar, Subinit. Roy, and Md. M. Shaikh. **EPJ Web of Conferences 86, 00055 (2015)**.

12. *Fragment emission mechanism in the $^{32}S + ^{12}C$ reaction*:
Ratnesh Pandey, S. Kundu, C. Bhattacharya, K. Banerjee, T. K. Rana, S. Manna, G. Mukherjee, J. K. Meena, A. Chaudhuri, T. Roy, Pratap Roy, Md. A. Asgar, **V. Srivastava**, A. Dey, M. Sinha, T. K. Ghosh, S. Bhattacharya, S. K. Pandit, K. Mahata, P. Patle, S. Pal, A. Shrivastava, and V. Nanal.**Phys. Rev. C 95, 064603(2017)**.

13. *Fission fragment mass distributions from ^{210}Po and ^{213}At*:
A. Sen, T. K. Ghosh, S. Bhattacharya, K. Banerjee, C. Bhattacharya, S. Kundu, G. Mukherjee, A. Asgar, A. Dey, A. Dhal, Md. Moin Shaikh, J. K. Meena, S. Manna, R. Pandey, T. K. Rana, Pratap Roy, T. Roy, **V. Srivastava**, and P. Bhattacharya. **Phys. Rev. C 96, 064609 (2017)**.

14. *The effect of clusters on fragment emission mechanism*:
S. Manna, T. K. Rana, C. Bhattacharya, S. Bhattacharya, S. Kundu, K. Banerjee, P. Roy, R. Pandey, **V. Srivastava**, A. Chaudhuri, T. Roy, T. K. Ghosh, G. Mukherjee, J. K. Meena, S. K. Pandit, K. Mahata, A. Shrivastava, and V. Nanal. **IOP Conf. Series: Journal of Physics: Conf. Series 863 (2017) 012064**.

15. *Survival of cluster correlation in dissipative binary breakup of $^{24,25}Mg^{\star}$*:
S. Manna, T. K. Rana, C. Bhattacharya, S. Bhattacharya, S. Kundu, K. Banerjee, Pratap Roy, R. Pandey, **Vishal Srivastava**, A. Chaudhuri, T. Roy, T. K. Ghosh, G. Mukherjee, J. K. Meena, S. K. Pandit, K. Mahata, A. Shrivastava, and V. Nanal. **Phys. Rev. C 94, 051601(R)(2016)**.

16. *Fission Fragment mass distributions in Reactions populating ^{200}Pb*:
A. Chaudhuri, A. Sen, T. K. Ghosh, K. Banerjee, Jhilam Sadhukhan, S. Bhattacharya, P. Roy, T. Roy, C. Bhattacharya, Md. A. Asgar, A. Dey, S. Kundu, J. K. Meena, G. Mukherjee, R. Pandey, T. K. Rana, **V. Srivastava**, R. Dubey, Gurpreet Kaur, N. Saneesh, P. Sugathan, and P. Bhattacharya. **Phys. Rev. C 94, 024617 (2016)**.

17. *Fragment emission studies in low energy light ion reactions*:
T. K. Rana, C. Bhattacharya, S. Manna, **V. Srivastava**, K. Banerjee, S. Kundu, P. Roy, R. Pandey, A. Chaudhuri, T. Roy, T. K. Ghosh G. Mukherjee, S. Bhattacharya, J.K. Meena, S. K. Pandit, K. Mahata, P. Patale, A. Shrivastava, and V. Nanal. **EPJ Web of Conferences 86, 00036 (2015)**.

18. *Direct evidence of washing out of nuclear shell effects*:
A. Chaudhuri, T. K. Ghosh, K. Banerjee, S. Bhattacharya, Jhilam Sadhukhan, C. Bhattacharya, S. Kundu, J. K. Meena, G. Mukherjee, R. Pandey, T. K. Rana, P. Roy, T. Roy, **V. Srivastava**, and P. Bhattacharya. **Phys. Rev. C 91, 044620 (2015)**.

19. *Angular momentum dependence of the nuclear level density in the A≈170-200 Region*:
M. Gohil, Pratap Roy, K. Banerjee, C. Bhattacharya, S. Kundu, T. K. Rana, T. K. Ghosh, G. Mukherjee, R. Pandey, H. Pai, **V. Srivastava**, J. K. Meena, S. R. Banerjee, S. Mukhopadhyay, D. Pandit, S. Pal, and S. Bhattacharya,**Phys. Rev. C 91, 014609 (2015)**.

20. *No influence of a N=126 neutron-shell closure in fission-fragment mass distributions*:
A. Chaudhuri, T. K. Ghosh, K. Banerjee, S. Bhattacharya, Jhilam Sadhukhan, S. Kundu, C. Bhattacharya, J. K. Meena, G. Mukherjee, A. K. Saha, Md. A. Asgar, A. Dey, S. Manna, R. Pandey, T. K. Rana, P. Roy, T. Roy, **V. Srivastava**, P. Bhattacharya, D. C. Biswas, B. N. Joshi, K. Mahata, A. Shrivastava, R. P.Vind, S. Pal, B. R. Bahera, and Varinderjit Singh. **Phys. Rev. C 92, 041601(R) (2015)**.

21. *Fusion - fission dynamics studies using mass distribution as a probe*:
T. K .Ghosh, A. Chaudhuri, K. Banerjee, S. Bhattacharya, C. Bhattacharya, S. Kundu, G. Mukherjee, R. Pandey, T. K. Rana, P. Roy, T. Roy, **V. Srivastava**, P.Bhattacharya, **Pramana Journal of Physics 85, 291-301(2015)**.

22. *Further limit on 3 decay of Hoyle state*:
T. K. Ranaa, C. Bhattacharya, S. Bhattacharya, S. Kundu, K. Banerjee, T. K. Ghosh, G. Mukherjee, R. Pandey, P. Roy, **V. Srivastava**, M. Gohil, J. K. Meena, H. Pai, A. K. Saha, J. K. Sahoo, R. M. Saha. **EPJ Web of Conferences 66, 03072 (2014)**.

23. *Angular Momentum Dependence of Nuclear Level Density Parameter*:
M. Gohil, Pratap Roya, K. Banerjee, S. Bhattacharya, C. Bhattacharya, S. Kundu, T. K. Rana, T. K. K. Ghosh, G. Mukherjee, R. Pandey, J. K. Meena, H. Pai, **V. Srivastava**, A. Dey, Deepak Pandit, S. Mukhopadhyay, S. Pal, and S. R. Banerjee. **EPJ Web of Conferences 66, 03073 (2014)**.

24. *Estimation of direct components of the decay of the Hoyle state*:
T. K. Rana, S. Bhattacharya, C. Bhattacharya, S. Kundu, K. Banerjee, T. K. Ghosh, G. Mukherjee, R. Pandey, P. Roy, **V. Srivastava**, M. Gohil, J. K. Meena, H. Pai, A. K. Saha, J. K. Sahoo, R. M. Saha. **Phys. Rev. C 88, 021601(R) (2013)**.

25. *Angular-momentum-gated light-particle evaporation spectra from $^{97}Tc^{\star}$ and $^{62}Zn^{\star}$ systems*:
Pratap Roy, K. Banerjee, S. Bhattacharya, C. Bhattacharya, S. Kundu, T. K. Rana, T. K. Ghosh, G. Mukherjee, R. Pandey, J. K. Meena, M. Gohil, H. Pai, **V. Srivastava**, A. Dey, Deepak Pandit, S. Mukhopadhyay, S. Pal, and S. R. Banerjee. **Phys. Rev. C 86, 044622 (2012)**.

26. *Effect of collectivity on the nuclear level density*:
Pratap Roy, K. Banerjee, M. Gohil, C. Bhattacharya, S. Kundu, T. K. Rana, T. K. Ghosh, G. Mukherjee, R. Pandey, H. Pai, **V. Srivastava**, J. K. Meena, S. R. Banerjee, S. Mukhopadhyay, D. Pandit, S. Pal, and S. Bhattacharya. **Phys. Rev. C 88, 031601(R) (2013)**.

Publications in Conferences and Symposia:

1. *Fusion evaporation cross section measurements for $^{16}O+^{204}Pb$ at above barrier energies.*
P. Sandya Devi, P.V. Madhusudhana Rao, S.K. Duggi, G. Naga Jyothi, A. Tejaswi, V.V. Jyothi, M. Ratna Raju, N. Madhavan, J. Gehlot, S. Nath, M.M. Hosamani, A. Shamlath, M. Shareef, P.V. Laveen, P.N. Patil, A. Vinayak, Rohan Biswas, **V. Srivastava**, Md. Moin Shaikh, A. Parihari, B.K. Nayak. **Proceedings of the DAE-BRNS International Symp. on Nucl. Phys. 64, 539 (2019)**.

2. *Elastic scattering of deuterons from ^{27}Al target.*
Vishal Srivastava, N. Deshmukh, Subinit Roy **Proceedings of the DAE-BRNS International Symp. on Nucl. Phys. 63, 722 (2018)**.

3. *Reduction methodology for reaction cross sections induced by tightly bound nuclei.*
N. Deshmukh, **Vishal Srivastava Proceedings of the DAE-BRNS International Symp. on Nucl. Phys. 63, 564 (2018)**.

4. *Study of the nucleus ^{25}Mg.*
Vishal Srivastava, C. Bhattacharya, T. K. Rana, S. Manna, S. Kundu, S. Bhattacharya, K.

Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J.K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. Saha, Md. A. Asgar, A. Dey, Subinit Roy, and Md. Moin Shaikh. **Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 62, 572 (2017)**.

5. *Study of higher excited states of* ^{26}Al.
Vishal Srivastava, C. Bhattacharya, T. K. Rana, S. Manna, S. Kundu, S. Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J.K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. Saha, Md. A. Asgar, A. Dey, Subinit Roy, and Md. Moin Shaikh. **Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 61, 514 (2016)**.
6. *Probing Hoyle analogoue state in* ^{16}O.
S. Manna, T. K. Rana, C. Bhattacharya, S. Kundu, K. Banerjee, Pratap Roy, R. Pandey, **V. Srivastava**, A. Chaudhury,A. Sen, T. K. Ghosh, Md. A. Asgar, T. Roy, G. Mukherjee, A. Dhal, A. Dey, M. Sinha, J. K. Meena, S. Bhattacharya. **Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 62, 364 (2017)**.
7. *Study of (α, 3He) and (α,t) reactions on* ^{27}Al *at 50 MeV*.
A. Dey, S. Ganguly, **V. Srivastava**, C. Bhattacharya, T. K. Rana, S. Kundu, K. Banerjee, P. Roy, H. Pai, T. K. Ghosh,R. Pandey,G. Mukherjee, J. K. Meena, M. R. Gohil, S. Bhattacharya. **Proceedings of the DAE-BRNS Symp. on Nucl. Phys. 61, 486 (2016)**.
8. *Study of one proton pick-up reaction* $^{27}Al(d,^3He)$.
Vishal Srivastava, C. Bhattacharya, T. K. Rana, S. Manna, S. Kundu, S. Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J.K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. Saha, Md. A. Asgar, A. Dey, Subinit Roy, and Md. Moin Shaikh. **Proceedings of the DAE Symp. on Nucl. Phys. 60, 342 (2015)**.
9. *Inelastic scattering of alpha particles from* ^{27}Al *target*.
Aparajita Dey, **V. Srivastava**, S. Ganguly, C. Bhattacharya, T. K. Rana, S. Kundu, K. Banerjee, P. Roy, H. Pai, T. K. Ghosh, R. Pandey, G. Mukherjee,J. K. Meena, M. R. Gohil, and S.Bhattacharya. **Proceedings of the DAE Symp. on Nucl. Phys. 60,, 350 (2015)**.
10. *Study of one neutron pick-up reaction* $^{27}Al(d,t)$.
Vishal Srivastava, C. Bhattacharya, T. K. Rana, S. Manna, S. Kundu, S. Bhattacharya, K. Banerjee, P. Roy, R. Pandey, G. Mukherjee, T. K. Ghosh, J. K. Meena, T. Roy, A. Chaudhuri, M. Sinha, A. Saha, Md. A. Asgar, A. Dey, Subinit Roy, and Md. Moin Shaikh. **Proceedings of the DAE Symp. on Nucl. Phys. 59, 358 (2014)**.
11. *Role of clustering in decay of* $^{24,25}Mg^*$.
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Aparajita Dey, **Vishal Srivastava**, C. Bhattacharya, S. Ganguly, T. K. Rana, S. Kundu, T. K. Ghosh, K. Banerjee, P. Roy, R. Pandey, H. Pai, G. Mukherjee , M.R. Gohil , J.K. Meena, S. Bhattacharya. **Proceedings of the DAE International Symposium on Nuclear Physics 58, 594 (2013)**.

35. *Signature of collective enhancement in nuclear level density.*
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R Pandey, T. K. Ghosh, K Banerjee, P Roy, C Bhattacharya, A Chaudhuri, S Kundu, T. K. Rana, G. Mukherjee, J. K Meena, **V. Srivastava**, A.K Saha, J. K Sahoo, S Bhattacharya. **Proceedings of the DAE International Symposium on Nuclear Physics 58, 982 (2013)**.

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38. *(α, ^{3}He) and (α, ^{3}H) transfer reaction studies at E_α=60 MeV.*
R. Pandey, A. Dey, T. K. Rana, M. Biswas, T. K .Ghosh, C. Bhattacharya, S. Kundu, K. Banerjee, G. Mukherjee, P. Roy, J. K. Meena, **V. Srivastava**, H. Pai, M. Gohil, S. Bhattacharya. **Proc. of DAE- BRNS symposium on Nucl. Phys. 57, 526 (2012)**.

39. *Study of angular momentum gated light-particle evaporation spectra in ^{4}He + ^{93}Nb and ^{4}He + ^{58}Ni reactions* :
Pratap Roy, K. Banerjee, S. Kundu, T. K. Rana, T. K. Ghosh, C. Bhattacharya, G. Mukherjee, R. Pandey, J. K. Meena, M. Gohil, H. Pai, **V. Srivastava**, A. Dey, S. Mukhopadhyay, D. Pandit, S. Pal, S. R. Banerjee, and S. Bhattacharya. **Proc. of DAE- BRNS Symposium on Nucl. Phys. 57, 420 (2012)**.

40. *Charged particle detector array: 45^0-175^0.*
S. Kundu, C. Bhattacharya, T. K. Rana, K. Banerjee, S. Bhattacharya, J. K. Meena, R. Saha, G. Mukherjee, T. K. Ghosh, R. Pandey, P. Roy, M. Gohil, **V. Srivastava**, A. Dey, G. Pal, S. Roy, S. R. Bajirao, C. Nandi. **Proc. of DAE symposium on Nucl. Phys. 57, 864 (2012)**.

41. *Development of a low pressure PPAC for detection of heavy charged particles.*
R. Pandey, T. K. Ghosh, J. K. Meena, K. Banerjee, C. Bhattacharya, S. Bhattacharya, M. Gohil, G. Mukherjee, S. Kundu, T. K. Rana, P. Roy, H. Pai, **V. Srivastava**. **Proc. of DAE symposium on Nucl. Phys. 57, 930 (2012)**.

Schools and Conferences Attended

- Theme Meeting on Nucleus Nucleus Collision Around Fermi Energy (NNCAFE 2010) December16 - 17, 2010, Variable Energy Cyclotron Centre, Kolkata, INDIA.
- VIIIth SERC-SCHOOL ON EXPERIMENTAL HIGH ENERGY PHYSICS (20th June-10th July 2011) at VECC, Kolkata, India
- National Workshop on NUCLEAR PHYSICS USING ION BEAMS FROM CYCLOTRONS at VECC - August 24 26 2011.

- Summer School on Experimental Nuclear Physics (5th 25th September 2011) at Banaras Hindu University, UP, India.
- DST SERC School on Modern Trends In Nuclear Structure And Dynamics (February 06 24, 2012) at IIT Roorkee, India.
- NUSTAR Week 2012 08th October to 12th October, 2012 at Variable Energy Cyclotron Centre, Kolkata, INDIA.
- DAE Symposium on Nuclear Physics (December 3 - 7, 2012) at university of Delhi, New Delhi, India.
- DST SERC School on Modern Theories of Nuclear Reactions (September 23 October 4, 2013) at IIT Roorkee, India.
- International Symposium On Nuclear Physics (December 2 - 6, 2013) at BARC, Mumbai.
- Rashtriya Vaigyanik Sangoshthi, 8th to 9th January, 2014 at Variable Energy Cyclotron Centre, Kolkata, India.
- FUSION 14 International Conference (February 24 - 28, 2014) at New Delhi, India.
- DAE Symposium on Nuclear Physics (December 8 - 12, 2014) at Banaras Hindu University, UP, India.
- CNT Winter School on Nuclear Astrophysics (January 19 - 31, 2015) at VECC, Kolkata, India.
- Frontiers in Gamma Spectroscopy-2015(FIG15), 18th -20th February 2015 at Variable Energy Cyclotron Centre, Kolkata, India.
- The 12th International Conference on Nucleus-Nucleus Collisions (NN2015), 21st -26th June, 2015 in Catania, Italy.
- Workshop on Recent trends in nuclear physics school (14 to 15-9-2015), at Inter university accelerator centre, New Delhi, India.
- DAE Symposium on Nuclear Physics, December 07-11, 2015, SSSIHL, Prasanthi Nilayam-515134, AP, India.
- DAE Symposium on Nuclear Physics, December 05-09, 2016, Saha Institute of Nuclear Physics, Kolkata-700064, India.
- International Conference in Nuclear Physics with Energetic Heavy Ion Beams (ICNP2017), 15-18 March, 2017, Department of Physics, Panjab University, Chandigarh, India.

Talk Delivered

Talk Delivered in National Conferences:

- *Study of one neutron pick-up reaction* ^{27}*Al(d, t)*, at DAE Symposium on Nuclear Physics, December 08-12, 2014, Banaras Hindu University, Varanasi, India.
- *Study of one proton pick-up reaction* ^{27}*Al(d,* ^{3}*He)*, at DAE Symposium on Nuclear Physics, December 07-11, 2015, SSSIHL, Prasanthi Nilayam-515134, AP, India.
- *Inelastic scattering of alpha particles from* ^{27}*Al target*, at DAE Symposium on Nuclear Physics, December 07-11, 2015, SSSIHL, Prasanthi Nilayam-515134, AP, India.

Talk Delivered in International Conferences:

- *Excited states of* ^{26}*Al studied via the reaction* ^{27}*Al(d, t)*, at 12th International Conference on Nucleus-Nucleus Collisions, June 21st -26th 2015, Catania, Italy.
- *States of* ^{26}*Mg studied via the reaction 27Al(d,* ^{3}*He)*, at International Conference in Nuclear Physics with Energetic Heavy Ion Beams (ICNP2017), 15-18 March, 2017, Department of Physics, Panjab University, Chandigarh, India.