

List of Publications

Publications in Peer-Reviewed Journals

Publications Related to Present Thesis

1. **Probing Uncertainties in Proton Capture on p-Nuclei: A Monte Carlo Investigation with TALYS-1.96**

Akash Hingu, Mahesh Choudhary, K. Katovsky, S. Mukherjee
To be published in Physica Scripta (ISNS-24 Conference at Bulgaria).

2. **Investigation of $^{58}\text{Ni}(n,p)^{58}\text{Co}$ reaction cross-section with covariance analysis**

Akash Hingu, S. Mukherjee, Siddharth Parashari, Sangeeta, A. Gandhi, Mahima Upadhyay, Mahesh Choudhary, Sumit Bamal, Namrata Singh, G. Mishra, Sukanya De, Saurav Sood, Sajin Prasad, G. Saxena, Ajay Kumar, R.G. Thomas, B.K. Agrawal, A. Kumar
Chinese Physics C, 48, 2, (2024).

3. **Astrophysical S factor and reaction rate of $^{92,94}\text{Mo}(p,\gamma)$ relevant to the p-process**

Akash Hingu, P. M. Prajapati, S. Mukherjee, R. G. Pizzone, and K. Katovsky
EPJ Web of Conferences, 275, 02006, (2023).

4. **Cross-sections for production of $^{115\text{m}}\text{In}$ by quasi-monoenergetic neutrons within 7-20 MeV**

Akash Hingu, Bhargav Soni, Siddharth Parashari, Rajnikant Makwana, P.M. Prajapati, Vibhuti Vashi, Mayur Mehta, R. Palit, S.V. Suryanarayana, B.K. Nayak, K. Katovsky, S. Mukherjee
Radiation Physics and Chemistry, 199, 110270, (2022).

5. **Semi-empirical systematics formulas for the (n, p), (n, α) and (n, 2n) reaction cross-sections at 14.5 MeV**

Akash Hingu, Siddharth Parashari, Suraj K. Singh, Bhargav Soni and S. Mukherjee
Radiation Physics and Chemistry, 188, 109634, (2021).

Other Publications

1. **Analysis of uncertainty propagation and covariance for $^{181}\text{Ta}(n, \gamma)^{182}\text{Ta}$ nuclear reaction at 0.53 and 1.05 MeV**

Namrata Singh, Mahesh Choudhary, A. Gandhi, Aman Sharma, Mahima Upadhyay, **Akash Hingu**, G. Mishra, Sukanya De, A. Mitra, L. S. Danu, Ajay Kumar, R. G. Thomas, Saurav Sood, Sajin Prasad, B. Lalremruata, Yu. N. Kopach, I. N. Ruskov and A. Kumar

To be submitted.

2. **Study of the uncertainty quantification of the $^{121}\text{Sb}(n, \gamma)^{122}\text{Sb}$ reaction**

Namrata Singh, Mahesh Choudhary, A. Gandhi, Aman Sharma, Mahima Upadhyay, R. K. Singh, **Akash Hingu**, G. Mishra, Sukanya De, L. S. Danu, Ajay Kumar, R. G. Thomas, Saurav Sood, Sajin Prasad, B. Lalremruata, Yu. N. Kopach, I. N. Ruskov and A. Kumar

Under review in Journal of Physics G: Nuclear and Particle Physics.

3. **Comprehensive analysis of uncertainty quantification for $^{58}\text{Ni}(n, p)^{58}\text{Co}$ reaction**

Mahesh Choudhary, Aman Sharma, Namrata Singh, Mahima Upadhyay, Punit Dubey, A. Gandhi, **Akash Hingu**, G. Mishra, Sukanya De, L. S. Danu, Ajay Kumar, R. G. Thomas, Saurav Sood, Sajin Prasad, S. Mukherjee, I. N. Ruskov, Yu. N. Kopach and A. Kumar

Chinese Physics C, 48, 094104, (2024).

4. **Measurement of neutron induced reaction cross-section of ^{99}Mo**

Mahima Upadhyay, Mahesh Choudhary, Namrata Singh, A. Gandhi, Aman Sharma, Sumit Bamal, **Akash Hingu**, S. Mukherjee, G. Mishra, Sukanya De, L. S. Danu, Saurav Sood, Sajin Prasad, Ajay Kumar, R. G. Thomas, and A. Kumar
Journal of Physics G: Nuclear and Particle Physics, 50, 125107, (2023).

5. **$^{13}\text{C}(\alpha, n)^{16}\text{O}$: The source of neutrons for the s-process main component**

P. M. Prajapati, Mahin Qureshi, **Akash Hingu**, R. G. Pizzone, M. La Cognata, S. V. Suryanarayana, Sachin Shet, S. Mukherjee
EPJ Web of Conferences, 275, 02014, (2023).

6. **Production and characterisation of $^{20,22}\text{Ne}$ targets**

P. M. Prajapati, R. G. Pizzone, **Akash Hingu**, S. Mukherjee, and S. V. Suryanarayana
Pramana, 96, 167, (2022).

Publications in Proceedings of Conferences

1. **Measurement of $^{109}\text{Ag}(n,\gamma)^{110\text{m}}\text{Ag}$ reaction cross section in the incident neutron energy 0.5-1.6 MeV**

Mahima Upadhyay, A. Gandhi, Aman Sharma, Mahesh Choudhary, Namrata Singh, Sumit Bamal, **Akash Hingu**, S. Mukherjee, G. Mishra, Sukanya De, A. Mitra, L. S. Danu, Saurav Sood, Sajin Prasad, Ajay Kumar, R. G. Thomas, A. Kumar

Proceedings of the 16th Biennial DAE-BRNS Symposium on Nuclear and Radiochemistry (2023).

2. **Neutron induced reaction cross-section of tantalum**

Namrata Singh, A. Gandhi, Mahesh Choudhary, Aman Sharma, Mahima Upadhyay, Sumit Bamal, **Akash Hingu**, G. Mishra, Sukanya De, A. Mitra, L. S. Danu, Saurav Sood, Sajin Prasad, Ajay Kumar, R. G. Thomas and A. Kumar

Proceedings of the DAE Symp. on Nucl. Phys. 67 (2023).

3. **Neutron induced reaction cross section measurement for silver with detailed uncertainty quantification**

Mahima Upadhyay, Mahesh Choudhary, Namrata Singh, A. Gandhi, Aman Sharma, Sumit Bamal, **Akash Hingu**, S. Mukherjee, G. Mishra, Sukanya De, L. S. Danu, Saurav Sood, Sajin Prasad, Ajay Kumar, R. G. Thomas, and A. Kumar

Proceedings of 29th International Seminar on Interaction of Neutrons with Nuclei (ISINN-29), JINR, E3-2023-58, Dubna, (2023).

4. **Measurements of neutron capture cross-sections on ^{109}Ag at 0.53, 1.05, 1.66 MeV**

Mahima Upadhyay, A. Gandhi, Aman Sharma, Mahesh Choudhary, Namrata Singh, Sumit Bamal, **Akash Hingu**, S. Mukherjee, G. Mishra, Sukanya De, A. Mitra, L. S. Danu, Saurav Sood, Sajin Prasad, Ajay Kumar, R. G. Thomas, K. Katovsky and A. Kumar

Proceedings of 23rd International Scientific Conference on Electric Power Engineering (EPE), (2023).

5. **Measurement of $^{121}\text{Sb}(n,\gamma)^{122}\text{Sb}$ reaction cross-sections within 1.6-3.1 MeV neutron energy range**

Namrata Singh, A. Gandhi, Mahesh Choudhary, Aman Sharma, Mahima Upadhyay, Punit Dubey, N. K. Dubey, Utakarsha Mishra, Sumit Bamal, **Akash Hingu**, R. K. Singh, G. Mishra, Sukanya De, A. Mitra, L. S. Danu, Saurav Sood, Sajin Prasad, Ajay Kumar, R. G. Thomas, and A. Kumar

Proceedings of the DAE Symp. on Nucl. Phys. 66 (2022).

6. **Experimental and theoretical cross-sections of $^{109}\text{Ag}(n,\gamma)^{110\text{m}}\text{Ag}$ reaction in the incident neutron energy 0.5-1.6 MeV**

Mahima Upadhyay, A. Gandhi, Aman Sharma, Mahesh Choudhary, Namrata Singh, Punit Dubey, N. K. Dubey, Utakarsha Mishra, Sumit Bamal, **Akash Hingu**, G. Mishra, Sukanya De, A. Mitra, L. S. Danu, Saurav Sood, Sajin Prasad, Ajay Kumar, R. G. Thomas, A. Kumar

Proceedings of the DAE Symp. on Nucl. Phys. 66 (2022).

7. **Experimental and theoretical cross-sections of $^{115}\text{In}(n,n')$ reaction at 19 and 16 MeV using quasi-monoenergetic neutrons**

Akash Hingu, Bhargav Soni, S. Mukherjee, Rajnikant Makwana, Siddharth Parashari, Vibhuti Vashi, Mayur Mehta, R. Palit, and S. V. Suryanarayana

Proceedings of the DAE Symp. on Nucl. Phys. 65 (2021).

8. **Measurement of isomeric cross-section at energy of astrophysical interest**

Vibhuti Vashi, R. Makwana, B. Quintana, M. Mehta, S. Mukherjee, B. Soni, M. Abhangi, S. Vala, N. Singh, R. Singh, G. Patel, **Akash Hingu**, S. Suryanarayana, B. Nayak, S. Sharma, and T. N. Nag

Proceedings of the DAE Symp. on Nucl. Phys. 65 (2021).

