

Vivek Kumar Jha

Junior Research Fellow (JRF)



About me

Born: 03 March 1995
Place: Darbhanga, Bihar
Gender: Male
Nationality: Indian

Current address

Aryabhata Research Institute of observational sciencES (ARIES).
Department of Astronomy,
Manora Peak,
Nainital, Uttarakhand,
India, 263002.

Research Interests

- Active galactic nuclei
- Quasar accretion disks
- Reverberation Mapping
- Supermassive Black Holes
- Computational astrophysics

Programming Skills

Fluent in Python language.
Usage of Git version control
Data reduction: astropy packages
including ccdproc, photutils etc.
OS: Linux (preferred)

Other Interests

Classical music, Offbeat travel,
Trekking, Reading, Amateur
astronomy, Scientific outreach,
Writing

Languages

English • Hindi • Maithili

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EDUCATION

Present	Deen Dayal Upadhyaya Gorakhpur University GORAKHPUR, UTTAR PRADESH · India 📍 Pursuing Ph.D in astrophysics. Thesis title: <i>Investigating the Nature and Structure of the Broad Line Region in Active Galactic Nuclei</i> . Supervised by: Dr. Hum Chand and co-supervised by Prof. Shantanu Rastogi.	
2017	Banaras Hindu University VARANASI, UTTAR PRADESH · India 📍 Master of Science (M Sc.) in Physics with specialization in Space physics.	
2014	University of Delhi NEW DELHI · India 📍 Bachelor of Science (B Sc.) with Honors in Physics.	

RESEARCH EXPERIENCE

Present	Aryabhata Research Institute of observational sciencES (ARIES) NAINITAL, UTTARAKHAND · India 📍 Research fellow, pursuing research at this institute leading to the Ph.D degree at DDU Gorakhpur.	
2017	Indian Institute of Astrophysics KODAIKANAL, TAMIL NADU · India 📍 6 month internship project as part of Visiting Student Research program (VSRP). Project titled- <i>Estimation of Solar magnetic fields using Spectropolarimetric data obtained from Kodaikanal Tunnel telescope</i> . Supervised by: Dr. K Nagaraju	
2016	Banaras Hindu University VARANASI, UTTAR PRADESH · India 📍 Dissertation titled- <i>Study of properties of Csl as a photo cathode for UV astronomy purposes</i> . as part of M Sc. Physics degree. Supervised by: Prof. B.K. Singh	

AWARDS/FELLOWSHIPS

2018	Junior Research Fellowship (JRF) from Department of Science and Technology (DST) Government of India for 3 years.
2017	Qualified Graduate Aptitude in Engineering (GATE): Physics.
2017	Qualified Joint Entrance Screening Test (JEST): Physics.
2016	ISRO Space Science Promotion Scheme (SSPS) Fellowship for 1 year.

COMPETITIVE TELESCOPE TIME AWARDS:

- 1 3.6m Devasthal Optical Telescope (DOT). In search of luminous Quasars at the cosmic dawn, cycle: 2020-C2 (Oct-2020:Jan-2021), as PI.
- 2 Thai Robotic Telescope (TRT). Photometric reverberation mapping of the accretion disk in AGN, cycles: 8A (Oct-Dec:2020), 7D (Jul-Sep:2020) and 7C (Apr-Jun:2020) as PI.
- 3 1.3m Devasthal Fast Optical telescope (DFOT). Photometric Reverberation Mapping of central region of AGN using H-beta emission line, cycles: 2019 (A), 2019 (B) and 2020 (A), as PI
- 4 1.04m Sampurnanand telescope (ST). Multi-wavelength photometric observations of a few Low Red-Shift Broad Line Seyfert 1 Galaxies, cycles: 2018 (B), 2019 (A) and 2020 (A), as PI
- 5 VLT-ESO. Dissecting baryon cycle in overdense environments, cycle: P106 as Co-I. PI: Ravi Joshi

CONFERENCES/MEETINGS/WORKSHOPS

- 1 Presented a **poster** titled: *Devasthal Optical Telescope-AGN Reverberation Monitoring(DOT-ARM): Project strategy and initial results* at the international conference titled "Mapping Central Regions of Active Galactic Nuclei" held in Guilin, Guaxi Province; China (19-24 September, 2019). [link]
- 2 Attended I-TMT (India- TMT) Science and Instruments Workshop held in ARIES, Nainital, India (17 - 19 October, 2019). [link]
- 3 Attended one day Indo Thai Workshop held in ARIES, Nainital, India (02 March 2020). [link]
- 4 Attended international ILMT workshop held online by ARIES, Nainital, India (29 June - 01 July, 2020). [link]
- 5 Presented a **talk** titled: *A comparative study of Narrow and Broad line Seyfert galaxies using SDSS* at an international symposium titled "Astronomical Surveys and Big Data 2 (ASBD-2)" held online by the Byurakan Astrophysical Observatory (BAO), Armenia (14-18 September, 2020) [link]
- 6 Attended the Virtual Annual Meeting of the German Astronomical Society 2020, held online between September 21-25, 2020. [link]

JOURNAL PUBLICATIONS

- 1 Nabeel Jammal, R. Rai, Triloki, **V. Jha** , B.K. Singh: The impact of humidity and film thickness on photoemission, optical and morphological properties of CsI thin film photocathodes. Thin Solid Films 02/2019; 674.,[DOI:10.1016/j.tsf.2019.01.027]

CONFERENCE PROCEEDINGS

- 1 **V Jha** , Nabeel Jammal, Tiloki, B K Singh: Optical properties of "as-deposited" CsI photocathode in the VUV-UV spectral range. Proceedings of the DAE Symp. on Nucl. Phys. 62 (2017); 07/201

MENTORING/TEACHING EXPERIENCE

- 2019** Mentored a group of 7 students selected from various universities during ARIES Training School on Observational Astronomy (ATSOA) in March 2019.

REFERENCES

- 1 **Dr. Hum Chand**, Professor of Physics, CUHP, Dharamshala. Email: hum (at) aries.res.in
- 2 **Dr. Abhay Kumar Singh**, Professor of Physics, BHU, Varanasi. Email: singhak (at) bhu.ac.in
- 3 **Dr. Shantanu Rastogi**, Professor of Physics, DDU, Gorakhpur. Email: shantanur (at) hotmail.com