



## RISHABH SINGH TEJA

PhD Student  
Indian Institute of Astrophysics  
Bengaluru, Karnataka, India-560034

Namaste! Hello! Greetings!  
I am a Ph.D. student working on the photometric and spectroscopic observations, analysis, and modeling of Core-Collapse Supernovae. I love to do Science as well as Data Science. Presently, I am trying to understand the demises of massive stars in our Universe.

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## EDUCATION

### High School (10th) 2011–2012

1st Division

Hilton Convent Senior Secondary School, Amroha, UP-244221  
Hindi, English, Maths, Science, and Social Studies

### Intermediate (12th) 2012–2014

1st Division

Hilton Convent Senior Secondary School, Amroha, UP-244221  
Maths, Physics, Chemistry, English, and Physical Education

### Graduation (B.Sc. (H) Physics) 2014–2017

1st Division

Ramjas College, University of Delhi, Delhi-110009  
Physics and related subjects + Mathematics and Chemistry (2 sem)

### Post-Graduation (M.Sc. Physics) 2017–2019

1st Division

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Department of Physics & Astrophysics, University of Delhi, Delhi-110009  
[Affiliation: Hansraj College, University of Delhi]  
Classical, Quantum, Statistical, Nuclear (Lab+Theory),  
Electrodynamics, GR & Cosmology, and Astronomy

### Ph. D. (Astronomy & Astrophysics) 2019–ongoing

Indian Institute of Astrophysics, Bengaluru, Karnataka-560034  
[Affiliation: Pondicherry University]  
Topic: Observational and theoretical studies of low-redshift core-collapse supernovae

## PUBLICATIONS

- **SN 2020jfo: A Short-plateau Type II Supernova from a Low-mass Progenitor** Rishabh Singh Teja et al 2022 ApJ 930 34 DOI:- <https://doi.org/10.3847/1538-4357/ac610b>
- **Optical studies of a bright Type Iax supernova SN 2020rea** Mridweeka Singh et al. 2022...MNRAS 517 (4), 5617-5626
- **SN 2018gj: A Short-plateau Type II Supernova with Persistent Blue-shifted H $\alpha$  Emission** Rishabh Singh Teja et al. 2023 [Submitted to ApJ]
- **Observational properties of a bright type Iax SN 2018cni and a faint type Iax SN 2020kyg** Mridweeka Singh et al. 2023 [Revision Submitted to ApJ]

## PUBLICATIONS [Non-Refereed]

- **GRB 210204A: Optical Observations from HCT** Rishabh Singh Teja et al. , ...GRB Coordinates Network 29414, 1

[Continued...]

## Interests/Hobbies/Others

- Love playing both indoor and outdoor games such as Table Tennis, Badminton, Volleyball, Cricket, and Chess
- Love reading fiction books
- Ardent Cinema lover
- Tech enthusiast
- Worked on different committees at school and college level
- Presently involved in editorial & design roles for IIA's science e-Magazine 'DOOT'
- Part of institute's computer committee as student representative

## Philosophy

*I have always believed in working hard with honesty. I am always eager to learn new things, whether new tools, concepts, or even sports. I have always been a very keen listener and love to hear about different things from everyone. I believe in self-learning and followed it most of my life. I have experienced that, howsoever challenging things may seem, if we keep working hard, it eventually bears fruit and presents us with wonderful outcomes. I like to do everything with utmost dedication and passion.*

## Societies

- **Life member**, Astronomical Society of India (ASI) [L2454]

## RESUME

- AT2022wgv is a galactic CV H Kumar et al., ... The Astronomer's Telegram 15644, 1

## PRESENTATIONS (Talk/ Poster)

- Poster presented on "**Observational studies of a short plateau Type IIP supernova 2020jfo**" at ASI 2022 Meet, Roorkee, India ([March 2022](#))
- Poster presented on "**Observations and modelling of two Type IIP supernovae in M61**" in "IAU Symposium 361: Massive Stars Near and Far", Ballyconnell, Ireland ([May 2022](#))
- Contributory talk given on "**Panchromatic observations and modeling of two Type II supernovae in M61: Similar origins yet different fates**" in "Young Astronomers' Meet 2022", ARIES, Nainital, India ([Nov 2022](#))
- E-poster presented on "**Origins of a short plateau type II supernova SN 2020jfo: low mass RSG or binary?**" in SuperVirtual 2022, ([Nov 2022](#))
- Talk on "**Understanding Type IIP progenitors with emphasis on short plateau Type II Supernovae**" in Indo/Japan Supernova workshop at Hiroshima University, Japan ([March 2023](#))

## SKILLS

### Tools / Softwares

MESA Star, STELLA, IRAF, PyRAF, Git, LINUX, SYNAPPS, TARDIS, vim

### Programming Languages

Python, C and C++  
**Languages**

Hindi (Mother Tongue), English, Punjabi(Speak)

### Data Reduced & Used

Himalayan Chandra Telescope (HCT), India; Swift/UVOT; GROWTH India Telescope, Devasthal Optical Telescope, India

### Others

MS-Office, matplotlib, scipy, jupyter-notebooks, Tkinter, HTML, CSS, Javascript, Adobe InDesign, LaTeX, Machine Learning Basics

## OTHER ACHIEVEMENTS

- Awarded certificate of merit in high school (CGPA 10.0)
- Under top 10 in the district in high school results
- Qualified written NDA/NA written Examination (2013)
- Qualified written CDS examination twice (2015, 2016)
- Qualified IIT-JAM (2017)
- Awarded Dr. K.S. Krishnan Gold Medal for highest marks in the University in M.Sc (2019)
- Qualified national level CSIR-NET (once) (2018)
- Qualified national level CSIR-JRF (twice) (2018, 2019)
- Qualified national level GATE exam (2019)