

JAYDEEP KANDEKAR

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EDUCATION

Savitribai Phule University, Pune, IN

New Arts, Commerce and Science College, Ahmednagar, IN

Bachelor of Science, Physics

CGPA: 9.7

Jun 2019 - August 2022

Relevant Coursework:

Nuclear Physics, Astronomy and Astrophysics, Classical Mechanics,
Quantum Mechanics, Solid-state Physics, Electrodynamics,
Mathematical Methods in Physics, Thermodynamics and Statistical Physics,
Computational Physics.

Savitribai Phule University, Pune, IN

Maharashtra Junior College, Ahmednagar, IN

Higher Secondary Education (HSC)

percentage: 74.46

Jun 2017 - May 2019

Relevant Coursework:

Physics, Chemistry, Mathematics, and Computer Science.

PROJECTS/RESEARCH EXPERIENCE

The Study of Formation and Evolution of type II Coronal Mass Ejections.

May 2022 - present

- Type II CME event selection.
- Event data analysis, handling FITS files.
- Study of evolution of type II CME.
- Plotting frequency and time spectra using sunpy.
- Working on a research paper.

The Impact of Sagittarius Dwarf galaxy and Milky Way. galaxy

May 2022 - present

Supervisor: Dr. Payel Das, University of Surrey, UK

- Studied Galaxy formation and evolution.
- Studied the Impact of Sagittarius Dwarf galaxy and Milky Way galaxy.
- The velocity dispersion profile of stars after the impact was determined using impulse approximation method.
- Integrated the Orbit of Stars after the Impact.

Photometric data analysis of variable stars

using Maxim DL.

Jan 2022 - June 2022

*Supervisor: Mr. Anirudh Deshpande, Vice president Jyotirvidya Parisantha,
Pune-411030, IN*

- Studied the variable stars and their types.
- Collected the data of a star named SZ LYN using a observatory.
- Analysed the photometric data using Maxim DL pro suite.
- Plotted a light curve of magnitude v /s time period of a star named SZ LYN.
- The variations in the magnitude and time period was calculated using MS Excel.

SKILLS AND SOFTWARE PROFICIENCY

TECHNICAL SKILLS:

- **Languages:** Python(elementary proficiency), C/C++, LATEX, Overleaf, Maxima.
- **OS:** Windows 7, 8, 9 ,10 ,11, Linux, and UBUNTU.
- **Productivity/software tools:** Microsoft office, GitHub, Google sheets, Google docs, Adobe Photoshop, Podcast(anchor), Maxim DL pro suite.
- **IDEs:** Arduino IDE, and Jupyter.
- **Python tools:** scipy, numpy, astropy, gwpy, sunpy.

Astronomical Instrumentation:

- **Telescopes:** 6" to 12" Newtonian Reflector, Sky-Watcher 150 EQ, Celestron 130 EQ-RA motor.
- **Mounts:** German Equatorial mount.
- **Sensors:** CCD Camera and DSLR camera.

SUMMER SCHOOLS, WORKSHOPS, AND CONFERENCES

SUMMER SCHOOL/WINTER SCHOOL:

- [ICTP International school](#) on Cosmology 2022.
- [ICTP-IAEA](#) International Winter school on Radioactive waste packaging 2021.
- [DAWN Winter School on Astrophysics](#) organized by University of Copenhagen, Denmark 2022.
- [Introductory Summer School](#) in Astronomy and Astrophysics, IUCAA, IN.

WORKSHOPS:

- SAGAN Caltech Workshop on Exoplanets 2021.

RESEARCH INTERESTS

- Gravitational Physics/The General Theory of Relativity.
- Cosmology.
- High Energy Astrophysics.
- Radio Astronomy.

PUBLICATIONS

- A Science Fictional book *“THE SKY”* by Jaydeep Kandekar Published on 13 August 2022 [Ongoing]

INVITED PRESENTATIONS

- “Stars and HR diagrams” at Progressive education society’s Modern College of Science, Ganeshkhind, Pune. Jan 2021
(participants-200)
- “Introduction to Cosmology and the Origin of the universe” at Zeal College of Engineering, Narhe, Pune. Jan 2020
(participants-70)
- Presentation on “Exoplanets” at Sir Parshurambhau College, Pune. Jan 2019

EXHIBITIONS

Inter-University centre for Astronomy and Astrophysics (Participants 500) Feb 2020
Topic: National Science Day 2020.

- *Presented a poster on “History of Moon”.*
- *Explained about the “origin of the universe”.*
- *Participated through Jyotirvidya Parisanstha (www.jvppune.in)*

International Centre for Theoretical Science’s CosmicZoom virtual Exhibition (ICTS-TIFR) (participants 2000) Mar 2021
Topic: Virtual Exhibition, Duration: 2 months.

- *Explained about “Evolution of human species”.*
- *Presented a poster on “Stars, Galaxies, Black holes and the Universe”.*

Indian Institute of Astrophysics, Bengaluru Feb 2021
Topic: Virtual Exhibition.

- *Presented a video on “birth and the fate of Black Holes”.*

VOLUNTEER SERVICE

- Organized a Stargazing event at Sir Parshurambhau College, Pune 2019 and 2020.
- Volunteered for Jyotirvidya Parisanstha’s “Variable Stars Observations” at the Observatory(KJO).
- Helped Jyotirvidya Parisanstha in organizing an event on “International Moon Observation Day/Night”.