

# GANESH PAWAR

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## EDUCATION

**Department of Physics, University of Mumbai, India**

*Master of Science, Physics*

CGPA 7.63/10.00

Aug. 2018 – Oct. 2020

**K. J. Somaiya College of Science and Commerce, Mumbai, India**

*Bachelor of Science, Physics*

CGPA 5.58/7.00

Jul. 2015 – May 2018

## APPOINTMENTS

**Visiting Project Student**

Feb. 2021 – Jun. 2021

*Aryabhata Research Institute of observational sciencES (ARIES)*

## RESEARCH EXPERIENCE

**i. Stellar activity of ‘B, A and F’ type stars.**

Feb. 2021 – Present

*ARIES, India*

- TESS Lightcurve Data is used to generate clean lightcurves with 5-sigma clipping to remove the jumps and outliers and the LombScargle algorithm were used to find the dominating pulsating frequencies.
- I have reduced the spectroscopic data taken from 2.0-m IUCAA Girawali Observatory by writing a python script to study variations in Equivalent Widths and I am using synthetic spectrum to find projected rotational velocity.

**ii. Observation of Stellar occultations by an Asteroid.**

2019-2020

*Akashmitra Mandal, Kalyan, India*

*As a part of the team, I have observed and reduced the lightcurves of 15 Stellar occultations out of which 9 positive events were reported to International Occultation Timing Association.*

**iii. Differential photometry of the Narrow line Seyfert-I galaxy 1H 0323+342**

March, 2019

*ARIES, India*

*I have cleaned the data for systemic noise and performed aperture photometry using IRAF. To find the variability, the target's magnitude is subtracted with the reference stars.*

**iv. DSLR photometry of a  $\delta$  Scuti variable star.**

2017

*Akashmitra Mandal, Kalyan, India*

*A High Amplitude  $\delta$  Scuti star, AD CMi was observed for 3 hours using 20 cm aperture reflector telescope and with a standard Canon DSLR camera. The time-series data was submitted to AAVSO and its period was deduce to 2.513 hr.*

## M.Sc. PROJECT

**X-Ray study of Active Galactic Nuclei.**

August, 2019 – August, 2020

*Department of Physics, University of Mumbai*

- We have surveyed the available data for AGN of various classes from Chandra Data Archive.
- The corresponding X-ray data from the Chandra Data Archive was obtained and the X-ray spectra were extracted and preprocessed using Chandra Interactive Analysis of Observations (CIAO) which has also integrated by writing a BASH script to do the task in one go, corrected it for red-shift by writing python scripts.
- We found some common features which are quite easily visible from the spectrum and studied atomic radiative and collisional processes which leads to emission of X-rays in astrophysical sources.

## PUBLICATIONS

**Pluto's Atmosphere in Plateau Phase Since 2015 from a Stellar Occultation at Devasthal**

*Sicardy, B., Ashok, N. M., Tej, A., Pawar, G., et al. 2021, **ApJL**, 923, [L31](#).*

**LAMOST J045019.27 + 394758.7: A suspected C star that shows characteristics of a normal giant**

*Purandardas, M., Goswami, A., Sonamben, M., Pawar, G., et al., **MNRAS**, under revision.*

**Measurements of 60 Double Star Systems Using a Small Telescope and Four Different Methods**

*Deshmukh, S., Deshpande, A., Pawar, G., et al. 2019, **Journal of Double Star Observations**, 15, 1, [p. 193](#).*

## OBSERVING RUNS

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**Rotational state of the elusive Lucy targets**, 2-m Himalayan Chandra Telescope (HCT),  
cycle: HCT-2020-C3, as Co-I. PI: Prof. N. M. Ashok.

**Stellar occultations by Dwarf Planets, TNOs and Centaurs**, 3.6-m Devasthal Optical Telescope (DOT),  
cycle: DOT-2020-C2, as Co-I. PI: Prof. N. M. Ashok.

**Stellar occultations by Pluto**, 3.6-m DOT, 1.3-m Devasthal Fast Optical Telescope & 2-m HCT,  
cycle: Director's Discretionary Time-2020, as Co-I. PI: Prof. N. M. Ashok.

## WORKSHOPS/SCHOOLS

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<b>Heidelberg Summer School 2021</b> <i>Stellar Ecosystems</i>	September 13-17, 2021 <i>IMPRS-HD</i>
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<b>TESS Science Conference-II</b>	August 2-6, 2021 <i>MIT</i>
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<b>PHysics Of Eclipsing BinariEs Virtual Workshop</b>	June, 2021 <i>PHOEBE</i>
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<b>AAVSO Spectroscopy Workshop</b>	November 6-8, 2020 <i>American Association of Variable Star Observers(AAVSO)</i>
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<b>Regional Astronomy Meeting-VI</b> <i>Research in Astronomy: Opportunities and Challenges</i>	July 9-10, 2020 <i>IUCAA</i>
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<b>Carolyn Hurless Online Institute for Continuing Education(CHOICE) Course</b> <i>How to use VStar</i>	June, 2020 <i>AAVSO</i>
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<b>CHOICE Course</b> <i>Exoplanet Observing</i>	May, 2020 <i>AAVSO</i>
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<b>Gravitational-Wave Open Data Workshop 3</b>	May 26-28, 2020 <i>Gravitational Wave Open Science Center(GWOSC)</i>
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<b>ARIES Training School in Observational Astronomy(ATSOA)</b>	March, 2019 <i>ARIES, India</i>
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<b>IAPT Summer School</b> <i>Theoretical Physics</i>	April, 2017 <i>IAPT</i>
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## TECHNICAL SKILLS

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**Languages:** Python and C++.

**Operating System:** Linux (CentOS, Fedora & Ubuntu) and Windows.

**Plotting Software:** GNUPlot and OriginLab.

**Image Overlay software:** Aladin, Limovie and SAO Image DS9.

**Data reduction software:** AstroImageJ, CIAO, IRAF, IRIS, iSpec, PYOTE, TOPCAT and VStar.

**Libraries:** astropy, astroquery, matplotlib, numpy, and pandas.

**Other:** L<sup>A</sup>T<sub>E</sub>X and Microsoft Office.

## EXTRA-CURRICULAR ACTIVITIES

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**Asteroid Search Campaign by IASC:** Participated in an asteroid search campaign held by International Astronomical Search Collaboration, 2020.

**Volunteer for CERN at Vigyan Samagam:** Volunteered for the CERN exhibits during the Vigyan Samagam mega science exhibition in Mumbai, 2019.

**Hobbies and Activities:** Watching Sci-Fi movies, reading science blogs, travelling, trekking, playing football and member of AkashMitra Mandal, Kalyan (Amateur Astronomers' Organization).