


Koothodil Abhijith Augustine


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Employment History

2023 –  **Graduate Student Research Assistant**, Institute of Astronomy, National Tsing Hua University, Hsinchu, Taiwan.





Education

2023 –  **Ph.D. in Astronomy**, Institute of Astronomy, National Tsing Hua University, Hsinchu, Taiwan
Advisor: Prof. Chang, Hisang-Kuang

2021 – 2023  **M.Sc. in Physics**, at The Department of Physics, Sant Longowal Institute of Engineering and Technology, Punjab, India.
Thesis title: *Exploring the JWST PRIMER Catalog: An Investigation of Infrared Galaxies*.
Advisor: Prof. S.S. Verma


2018 – 2021  **B.Sc. in Physics**, at The Department of Physics, University College, The University of Kerala, Thiruvananthapuram, Kerala, India.
Thesis title: *Effect of Aerosol Absorption Coefficient on Solar Flux*.
Advisor: Dr. S. Bindu

Skills


Languages	 English, Malayalam, Telugu, Hindi and a basic proficiency in Tamil and French.
Coding	 Python.
Astro. Software	 XSpec, MEGAlib, Fermipy.
Misc.	 Academic research, tutoring cousins while in school, \LaTeX typesetting.

Articles

Bibliography

1 K. A. Augustine and H.-K. Chang, “Anticorrelation Between Flux and Photon Index of Hard-X-Ray Emission from the Crab,” vol. 981, no. 2, 173, p. 173, Mar. 2025.  DOI: 10.3847/1538-4357/adb70e.
arXiv: 2408.00406 [astro-ph.HE].




Conference Presentations

- 1 K. A. Augustine and H.-K. Chang, “An anti-correlation found between Photon Index and Flux in a long-term study of The Crab,” in *The 2025 Scientific Assembly of the Astronomical Society of the Republic of China (ASROC2025)*, National Formosa University, Taiwan, 2025.  URL: <https://indico.phys.nthu.edu.tw/event/143/contributions/596/>.
- 2 K. A. Augustine and H.-K. Chang, “An anti-correlation found between Photon Index and Flux in a long-term study of The Crab,” in *The 2024 Scientific Assembly of the Astronomical Society of the Republic of China (ASROC2024)*, National Changhua University of Education, Changhua, Taiwan, 2024.






- 3 K. A. Augustine and H.-K. Chang, "An anti-correlation found between Photon Index and Flux in a long-term study of The Crab," in *COSI Fest*, Space Science Laboratory, UC Berkeley, 2024.
- 4 K. A. Augustine and H.-K. Chang, "Spectral Analysis of Pulsars detected in the Swift BAT 157- Month Hard X-ray Survey," in *2024 Annual Meeting of the Physical Society of Taiwan*, Oral Contestant in Astrophysics, Gravity and Cosmology session, National Central University, Taoyuan, Taiwan, 2024.
[URL: https://tps2024.conf.tw/download/1538/File1/116593.pdf](https://tps2024.conf.tw/download/1538/File1/116593.pdf).

Miscellaneous


Awards and Achievements

- 2017  **Valedictorian**, 12th standard best outgoing student at St. Mary's Higher Secondary School, Mullenkolly, Kerala, India.
-  **CIGI, Calicut**, Selected to represent 300 students my higher secondary school to guide them in choosing their career. Attended a 5-day camp in The Centre for Information and Guidance India (CIGI), at Kozhikode, Kerala as part of this.
- 2015  **Valedictorian**, Proficiency Award in 10th class for scoring the highest grades at Little Flower High School, T. Sundupalli, Andhra Pradesh, India.

Activities

- 2024  **COSI**, I am a member of the upcoming NASA's Compton Spectrometer and Imager space telescope. I work primarily on the MeV pulsars and also polarization capabilities of COSI using cosi-py.
- 2017-2023  **Seminars**, Participated and organised multiple National and International Seminars during my undergraduate and postgraduate studies. Most of the seminars are related to multidisciplinary topics.
- 2021  **IUCAA-ISSAA, 2021**, Participated in Introductory Summer School Programme conducted by Inter-University Centre for Astronomy and Astrophysics, Pune from May 10 - June 11, 2021.
- 2018-2021  **WWS**, Was part of Walk With a Scholar(WWS), a mentoring programme for undergraduate students. Attended lectures of many eminent scientists from ISRO., and listened to talks by numerous Civil Service Officers and Emeritus Professors from top educational institutions and research organisations.
- 2015-2017  **NSS**, I was a part of the National Service Scheme (A scheme by Indian government public sector service program conducted by the Ministry of Youth Affairs) during Standard XII and participated in various extracurricular activities. We conducted a organ and blood donation drive, experienced green farming on first hand basis, uplifted a tribal camp etc. Attended a self organised 7-day camp of 50 students during Christmas, 2016.

Posters

- Jan 14 2025  **TPS 2025**, "Anti-correlation between Flux and Photon Index of Hard X-ray Emission from The Crab." At the 2025 Annual Meeting of the Physical Society of Taiwan at National Sun Yat-sen University, Kaohsiung, Taiwan.

Reference

Prof. Chang, Hsiang-Kuang

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