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Summary

I am a Project Scientist at the AstroSat UltraViolet Imaging Telescope (UVIT) Payload Operations Centre at the Indian Institute of Astrophysics, Bangalore with extensive experience in payload operations and data pipeline development. My research focuses on ultraviolet and multi-wavelength studies of nearby galaxies, AGN feedback, star formation, and time-domain astronomy in the ultraviolet. I actively develop and maintain open-source software for UV astronomy.

Education

PhD	CHRIST (Deemed to be University) , Physics	Bangalore, India
	<ul style="list-style-type: none"> Thesis (PhD): Study of the effect of AGN activity on star formation in nearby galaxies using UVIT Supervisors: Dr. Blesson Mathew, Prof. P. Sreekumar 	Dec 2017 – Mar 2025
MSc	CHRIST (Deemed to be University) , Physics	Bangalore, India
		June 2013 – Mar 2015
BSc	Christ College, Irinjalakuda , Physics	Thrissur, India
		June 2010 – May 2013

Experience

Indian Institute of Astrophysics , Project Scientist-I (UVIT Payload Operations Centre)	Bangalore, India
<ul style="list-style-type: none"> Lead contributor to UVIT Level2 pipeline (v7) and mission data products Responsible for UVIT Payload Operations Centre data processing and validation Support UVIT observations, calibration activities, and official mission data releases 	July 2022 – present 3 years 7 months
Indian Institute of Astrophysics , Research Trainee (UVIT Payload Operations Centre)	Bangalore, India
	Aug 2016 – May 2022 5 years 10 months
Bishop Cotton Women's Christian College , Guest lecturer	Bangalore, India
	June 2015 – Mar 2016 10 months

Peer reviewed publications

Detection of time delay between UV and X-ray variability in Mrk 1044 using AstroSat observations	Jan 2026
M. Reshma, C. S. Stalin, Amit Kumar Mandal, Abhijit Kayal, S. B. Gudennavar, Prajwel Joseph 10.48550/arXiv.2601.05135 (Accepted, Journal of High Energy Astrophysics)	
Nine years of UVIT: assessing sensitivity variation	Dec 2025
Akanksha Dagore, Prajwel Joseph , S. N. Tandon, Annapurni Subramaniam, S. K. Ghosh, C. S. Stalin 10.48550/arXiv.2512.24475 (Accepted, The Astronomical Journal)	
Redshift ~2.7 is not special: Comment on the Kolmogorov analysis of JWST deep survey galaxies	Sept 2025
Prajwel Joseph 10.1051/0004-6361/202555988 (Astronomy and Astrophysics)	

Euclid: Early Release Observations of ram-pressure stripping in the Perseus cluster: Detection of parsec-scale star formation within the low surface brightness stripped tails of UGC 2665 and MCG +07-07-070 K. George, A. Boselli, J. C. Cuillandre, M. Kümmel, A. Lancon, C. Bellhouse, T. Saifollahi, M. Mondelin, M. Bolzonella, Prajwel Joseph , ... 10.1051/0004-6361/202554836 (Astronomy and Astrophysics)	Sept 2025
UVIT data release version 7: Regenerated high-level UVIT data products Prajwel Joseph , S. N. Tandon, S. K. Ghosh, C. S. Stalin 10.1007/s12036-025-10069-5 (Journal of Astrophysics and Astronomy)	July 2025
Ultraviolet Flux and Spectral Variability Study of Blazars Observed with UVIT/AstroSat M. Reshma, Aditi Agarwal, C. S. Stalin, Prajwel Joseph , Akanksha Dagore, Amit Kumar Mandal, Ashish Devaraj, S. B. Gudennavar 10.3847/1538-4357/ad702e (The Astrophysical Journal)	Nov 2024
UVIT view of NGC 5291: Ongoing star formation in tidal dwarf galaxies at 0.35 kpc resolution R. Rakhi, Geethika Santhosh, Prajwel Joseph , Koshy George, Smitha Subramanian, Indulekha Kavila, J. Postma, Pierre-Alain Duc, ... 10.1093/mnras/stad970 (Monthly Notices of the Royal Astronomical Society)	June 2023
UVIT Observations of the Small Magellanic Cloud: Point-source Catalog A. Devaraj, Prajwel Joseph , C. S. Stalin, S. N. Tandon, S. K. Ghosh 10.3847/1538-4357/acba9c (The Astrophysical Journal)	Apr 2023
An automated pipeline for Ultra-Violet Imaging Telescope S. K. Ghosh, S. N. Tandon, S. K. Singh, D. S. Shelat, P. Tahlani, A. K. Singh, T. P. Srinivasan, Prajwel Joseph , A. Devaraj, Koshy George, R. Mohan, J. Postma, C. S. Stalin 10.1007/s12036-022-09842-7 (Journal of Astrophysics and Astronomy)	Dec 2022
Active galactic nucleus feedback in NGC 3982 Prajwel Joseph , Koshy George, K. T. Paul 10.1051/0004-6361/202243923 (Astronomy and Astrophysics)	Nov 2022
UVIT view of Centaurus A: a detailed study on positive AGN feedback Prajwel Joseph , P. Sreekumar, C. S. Stalin, K. T. Paul, Chayan Mondal, Koshy George, Blesson Mathew 10.1093/mnras/stac2388 (Monthly Notices of the Royal Astronomical Society)	Oct 2022
The Astropy Project: Sustaining and Growing a Community-oriented Open-source Project and the Latest Major Release (v5.0) of the Core Package Astropy Collaboration, ..., Prajwel Joseph , ... 10.3847/1538-4357/ac7c74 (The Astrophysical Journal)	Aug 2022
In-orbit performance of UVIT over the past 5 years S. K. Ghosh, Prajwel Joseph , A. Kumar, J. Postma, C. S. Stalin, Annapurni Subramaniam, S. N. Tandon 10.1007/s12036-020-09685-0 (Journal of Astrophysics and Astronomy)	Oct 2021
Curvit: An open-source Python package to generate light curves from UVIT data Prajwel Joseph , C. S. Stalin, S. N. Tandon, S. K. Ghosh 10.1007/s12036-020-09680-5 (Journal of Astrophysics and Astronomy)	Oct 2021

Performance of the UVIT Level2 pipeline S. K. Ghosh, S. N. Tandon, Prajwel Joseph , A. Devaraj, D. S. Shelat, C. S. Stalin 10.1007/s12036-020-09686-z (Journal of Astrophysics and Astronomy)	Oct 2021
More insights into bar quenching. Multi-wavelength analysis of four barred galaxies Koshy George, Prajwel Joseph , Chayan Mondal, Smitha Subramanian, Annapurni Subramaniam, K. T. Paul 10.1051/0004-6361/202038810 (Astronomy and Astrophysics)	Dec 2020
Additional Calibration of the Ultraviolet Imaging Telescope on Board AstroSat S. N. Tandon, J. Postma, Prajwel Joseph , A. Devaraj, Annapurni Subramanian, I. V. Barve, Koshy George, S. K. Ghosh, ... 10.3847/1538-3881/ab72a3 (The Astronomical Journal)	Apr 2020
Insights on bar quenching from a multiwavelength analysis: The case of Messier 95 Koshy George, Prajwel Joseph , Chayan Mondal, Smitha Subramanian, Annapurni Subramaniam, K. T. Paul 10.1051/0004-6361/201834500 (Astronomy and Astrophysics)	Jan 2019
Long-term ultraviolet variability of Seyfert galaxies N. Sukanya, C. S. Stalin, Prajwel Joseph , S. Rakshit, D. Praveen, R. Damle 10.1007/s12036-018-9556-z (Journal of Astrophysics and Astronomy)	Dec 2018
Dissecting star formation in the Atoms-for-Peace galaxy. UVIT observations of the post-merger galaxy NGC 7252 Koshy George, Prajwel Joseph , Patrick Côté, S. K. Ghosh, J. B. Hutchings, R. Mohan, J. Postma, K. Sankarasubramanian, ... 10.1051/0004-6361/201832705 (Astronomy and Astrophysics)	June 2018
UVIT observations of the star-forming ring in NGC 7252: Evidence of possible AGN feedback suppressing central star formation Koshy George, Prajwel Joseph , Chayan Mondal, Ashish Devaraj, Annapurni Subramanian, C. S. Stalin, Patrick Côté, S. K. Ghosh, ... 10.1051/0004-6361/201833232 (Astronomy and Astrophysics)	May 2018
In-orbit Calibrations of the Ultraviolet Imaging Telescope S. N. Tandon, Annapurni Subramanian, V. Girish, J. Postma, K. Sankarasubramanian, S. Sriram, C. S. Stalin, Chayan Mondal, S. Sahu, Prajwel Joseph 10.3847/1538-3881/aa8451 (The Astronomical Journal)	Sept 2017
Search for Low-mass Objects in the Globular Cluster M4. I. Detection of Variable Stars M. Safonova, D. Mkrtichian, P. Hasan, F. Sutaria, N. Brosch, E. Gorbikov, Prajwel Joseph 10.3847/0004-6256/151/2/27 (The Astronomical Journal)	Feb 2016

Open source projects

UVIT Level2 pipeline

Used to generate high-level (Level2) UVIT data products; adopted for official UVIT data release version 7 and archived at ISRO Science Data Archive.

Curvit

Curvit is a Python package to generate light curves from UVIT data.

Aafitrans

Aafitrans is a Python package that builds upon the capabilities of the Astroalign package's `find_transform` function. It incorporates several modifications to improve its functionality and performance.

CanUVIT

To check whether a field can be safely observed with UVIT.