

Eric Muller

Canberra, Australia
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EDUCATION

The Australian National University

Canberra, ACT

PhD in Astronomy and Astrophysics

Expected 01/2027

- Thesis: Machine Learning Methods for Cold HI Measurements
- Supervisors: Dr. Van Hiep Nguyen, Prof. Naomi McClure-Griffiths, Dr. Andrew Battisti

The Australian National University

Canberra, ACT

Bachelor of Science (Advanced) (Honours)

10/2023

- Honors: Astronomy and Astrophysics
- Thesis: Characterising the Spatial Variation of Dust Attenuation Across Cosmic Time
- Specialisations: Advanced Physics
- Majors: Astronomy and Astrophysics
- Minors: Mathematics
- Graduated with First Class Honours, and a GPA of 6.323

RESEARCH EXPERIENCE

Summer Research Scholar – MAVISIM

10/2023 – 01/2024

ANU RSAA / AITC / Northrop Grumman

Weston, ACT

Supervisors: Dr. Trevor Mendel, Dr. Jesse Cranney

- Project involved creating a spectrograph image simulator in Python for the MAVIS instrument. The project resulted in producing a research report and giving a colloquium presentation.

ASTRO3D Member

04/2023

ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions

Canberra, ACT

- Current member of the ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions (ASTRO3D)

MAGPI Research Collaboration Member

03/2023

- Current member of the Middle Ages Galaxy Properties with Integral field spectroscopy (MAGPI) research collaboration, with paper in preparation (2023)

Undergraduate Student Researcher

07/2022 – 10/2022

ANU RSAA

Weston, ACT

Supervisor: Dr. Andrew Battisti

- Thesis: Characterising the Spatial Variation of Dust Attenuation in Galaxies

Summer Research Scholar – DREAMS Telescope

10/2021 – 02/2022

ANU AITC / Northrop Grumman

Weston, ACT

Supervisor: Dr. Tony Travouillon

- Project involved conducting measurements in a lab environment using interferometry equipment, and producing a Python pipeline to analyse the data, to characterise optical components of a commissioned telescope. The project resulted in producing a research report and giving a colloquium presentation.

WORK EXPERIENCE

Academic Tutor

Self Employed

01/2024 – Current

Canberra, ACT

- Providing tutoring services, including both in-person and online session, and assignment feedback, for Primary- and Secondary-level students in the ACT. Involves a large amount of both written and oral communication with students and parents.

Academic Tutor

Futureproof Tutoring

02/2022 – 12/2023

Canberra, ACT

Manager: Ms. Tully Mahr (0459 398 498)

Hours per week: 15

- Providing tutoring services, including both in-person and online session, and assignment feedback, for Secondary-level students in the ACT. Involves a large amount of both written and oral communication with other tutors and parents of students.

OUTREACH

Invited speaker

ANU Astronomy Society

08/2023

- Gave a colloquium on my Honours research to a mixed audience of astronomy students and general undergraduate students.

PROFESSIONAL PUBLICATIONS

Muller, Eric G. M., Battisti A. J., Bellstedt S., Foster C., Mendel J. T., Taylor E. N.

(In preparation) *Characterising the Spatial Variation of Dust Attenuation Across Cosmic Time.*

CONFERENCES, MEETINGS & WORKSHOPS

- 2024 Harley Wood School of Astronomy: Organising committee member
- 3rd Australia-ESO Meeting 2023, Canberra, ACT: Talk, poster, and LOC member
- 2023 ASTRO3D Science Meeting: Talk

SKILLS

- **Observations:** Veloce/AAT at Siding Spring Observatory, 3.9m, 11 nights as primary observer, 4 of these training other observers
- **Programming Languages:** PYTHON, bash, MATHEMATICA, MATLAB, R, COBOL
- **Software:** L^AT_EX, terminal/remote computing, TOPCAT, SAO DS9, QFITSVIEW, version control with git, VSCode
- **General:** HPC experience using the Gadi supercomputer (NCI), Machine Learning models via pytorch

ADDITIONAL INFORMATION

- 2025/26 Recipient of the RSAA Supplementary Scholarship
- 2024 Recipient of the ANU Joan Duffield PhD Supplementary Scholarship
- 2023 Recipient of the Bok Honours Year in Astrophysics Scholarship
- 2023 Astronomical Computing course student representative
- Australian Institute of Physics Student Associate Member