Email: madeline_marshall (at) outlook (dot) com Website: https://madelinemarshall.github.io

Education

| 2017 – 2020 | Doctor of Philosophy | University of Melbourne |
|-------------|--|-------------------------|
| | Thesis: "The Host Galaxies of High-Redshift Quasars" | |
| | Supervisors: Professor Stuart Wyithe, Dr Simon Mutch | |
| 2016 | Bachelor of Science with First Class Honours | University of Tasmania |
| | Thesis: "Triggering Active Galactic Nuclei in Galaxy Clusters" | |
| | Supervisors: Dr Stanislav Shabala, Dr habil. Martin Krause | |
| 2015 – 2017 | Diploma of Philosophy | University of Tasmania |
| 2013 – 2015 | Bachelor of Science | University of Tasmania |
| | GPA: 7.0 (on a 7-point scale) | |

Press Release & Media Highlights

- Simulations Show Webb Telescope Can Reveal Distant Galaxies Hidden in Quasars' Glare, STSci/NASA Press Release, Oct. 2020
- Einstein-A-Go-Go Radio Interview, RRR Melbourne, Nov. 2020
- NASA's James Webb Telescope to Supersede Hubble Telescope Next Year, Radio Interview at SYN Melbourne, Nov. 2020

Awards & Scholarships

- Faculty of Science Postgraduate Writing-Up Award, The Albert Shimmins Fund, University of Melbourne, 2020
- Alan Kenneth Head Travel Scholarship, University of Melbourne, 2018
- Women in Physics Award, University of Melbourne, 2017
- Australian Government Research Training Program (RTP) Scholarship, University of Melbourne, 2017–2020
- Bok Prize, for outstanding research in astronomy by an Honours student or eligible Masters student at an Australian university, Astronomical Society of Australia, 2017
- University Medal, the highest undergraduate award, University of Tasmania (UTAS), 2017
- Tasmania Honours Scholarship, UTAS, 2016
- Adrian La Palombara Annual Appeal Honours Scholarship in Physics, UTAS, 2016
- Dean's Honour Roll for the Faculty of Science, Engineering and Technology, UTAS, 2013–2016
- Australian Institute of Physics Prize, for greatest proficiency in final year undergraduate Physics, UTAS, 2015
- Premier of Tasmania National Undergraduate Scholarship, UTAS, 2013–2016

Selected Talks

Dec. 2020 SAZERAC: Quasars During Reionisation Remote Conference

Observing quasar host galaxies with JWST: predictions from the BlueTides simulation

Oct. 2020 DAO Astronomy Colloquium

NRC Herzberg, Victoria, Canada (Remote) The Host Galaxies of High-Redshift Quasars

| July 2020 | Astrophysics Seminar University of Sussex, Brighton, UK (Remote) The Host Galaxies of High-Redshift Quasars | |
|-----------|--|--|
| Mar. 2020 | Black Holes and Galaxies at the Edge of the Universe Ringberg Castle, Germany Observing quasar hosts with JWST: preparations with HST and simulations | |
| Oct. 2019 | Cosmic Evolution of Quasars: From the First Light to Local Relics Kavli Institute for Astronomy and Astrophysics, Peking University, Beijing, China The Host Galaxies of High Redshift Quasars | |
| Aug. 2019 | Astrophysics Seminar Carnegie Mellon University, Pittsburgh, USA The Host Galaxies of High-Redshift Quasars | |
| July 2019 | Barefoot Reionization: Exploring the First Billion Years of the Universe Fitzroy Island, Queensland, Australia The Host Galaxies of High-Redshift Quasars | |
| July 2018 | Are AGN Special? Durham University, Durham, United Kingdom Ram Pressure Triggers AGN in Galaxy Clusters | |
| July 2018 | The Early Growth of Supermassive Black Holes Sexten Center for Astrophysics, Sexten, Italy Exploring High-z Black Hole-Bulge Relations with Semi-Analytics | |
| June 2018 | Astronomical Society of Australia Annual Scientific Meeting Swinburne University of Technology, Melbourne, Australia Exploring High-z Black Hole-Bulge Relations with Semi-Analytics | |
| July 2017 | Astronomical Society of Australia Annual Scientific Meeting Australian National University, Canberra, Australia Triggering AGN in Galaxy Clusters Bok Prize Talk | |

Selected Workshops & Training

- Galaxy Formation and Evolution in the Era of the Nancy Grace Roman Space Telescope, Virtual Conference, July 2020
- SAZERAC Summer All Zoom Epoch Of Reionization Astronomy Conference, Virtual Conference, July 2020
- São Paulo School of Advanced Science on First Light: Stars, Galaxies and Black Holes in the Epoch of Reionization, Instituto de Astronomia, Geofísica e Ciências Atmosféricas da Universidade de São Paulo, Brazil, July-August 2019
- ITSO/AAO Observational Techniques Workshop, Australian Astronomical Observatory Headquarters, April/May 2018
- ADACS Introduction to high performance computing (HPC) for astronomers, Swinburne University of Technology, November 2017

Selected Teaching, Outreach and Professional Activities

- Tutor, Physical Cosmology (Masters level), University of Melbourne, 2018–2020
- Lab Demonstrator, Third Year Laboratory and Computational Physics, University of Melbourne, 2018–2019
- Lab Demonstrator, First Year Physics (Advanced), University of Melbourne, Semester 2 2017
- Invited outreach talks, Riana Primary School, Smithton Primary School, and Smithton Rotary Club, Tasmania, 2018, 2019 and 2020
- Early Career Research Network (NRC ECRN), National Research Council of Canada, 2020–present
- Member of the Astronomical Society of Australia, ASA, 2017–present
- Student member of the ARC Centre of Excellence for All Sky Astrophysics in 3D, ASTRO 3D, 2017–2020

Marshall, M. A., Wyithe, J. S. B., Windhorst, R. A., Di Matteo, T., Ni, Y., Wilkins, S., Croft, R. A. C., and Mechtley, M.: 2021, "Observing the host galaxies of high-redshift quasars with JWST: predictions from the BlueTides simulation" arXiv e-prints arXiv:2101.01219.

Marshall, M. A., Mechtley, M., Windhorst, R. A., Cohen, S. H., Jansen, R. A., Jiang L., Jones, V. R., Wyithe, J. S. B., Fan, X., Hathi, N. P., Jahnke, K., Keel, W. C., Koekemoer, A. M., Marian, V., Ren, K., Robinson, J., Röttgering, H. J. A., Ryan, Jr., R. E., Scannapieco, E., Schneider, D. P., Schneider, G., Smith, B. M., and Yan, H.: 2020, "Limits to Rest-Frame Ultraviolet Emission From Far-Infrared-Luminous $z \simeq 6$ Quasar Hosts." ApJ 900, 21 DOI: 10.3847/1538-4357/abaa4c.

Marshall, M. A., Ni, Y., Di Matteo, T., Wyithe, J. S. B., Wilkins, S., and Croft R. A. C: 2020, "The host galaxies of z = 7 quasars: predictions from the BlueTides simulation." Accepted for publication in MNRAS. DOI: 10.1093/mnras/staa2982.

Marshall, M. A., Mutch, S. J., Qin, Y., Poole, G. B., and Wyithe, J. S. B.: 2020, "Dark-ages Reionization and Galaxy Formation Simulation – XVIII. The high-redshift evolution of black holes and their host galaxies." MNRAS 494, 2747 DOI: 10.1093/mnras/staa936.

Marshall, M. A., Mutch, S. J., Qin, Y., Poole, G. B., and Wyithe, J. S. B.: 2019, "Dark-ages Reionization and Galaxy Formation Simulation – XVII. Sizes, angular momenta and morphologies of high redshift galaxies." MNRAS 488, 1941. DOI: 10.1093/mnras/stz1810.

Marshall, M. A., Shabala, S. S., Krause, M. G. H., Pimbblet, K. A., Croton, D. J., and Owers, M. S.: 2018, "Triggering active galactic nuclei in galaxy clusters." MNRAS 474, 3615. DOI: 10.1093/mnras/stx2996.

Marshall, M. A., Ellingsen, S. P., Lovell, J. E. J., Dickey, J. M., Voronkov, M. A., Breen, S. L: 2017, "Methanol absorption in PKS B1830-211 at milliarcsecond scales." MNRAS 466, 2450. DOI: 10.1093/mnras/stw3295.