

Mallory Thorp

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Education

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| <i>University of Victoria</i> | 2019 - Present |
| PhD Candidate Physics and Astronomy Supervisor: Dr. Sara Ellison | |
| <i>University of Victoria</i> | 2017 - 2019 |
| MSc Physics and Astronomy Title: "Resolved Properties of Galaxy Mergers from the MaNGA Survey" Supervisor: Dr. Sara Ellison | |
| <i>Overall GPA: 8.00/9.00</i> | |
| <i>University of Washington – Seattle</i> | 2013 - 2017 |
| B.S. Astronomy and Physics (Double Major) Minor in Classical Studies <i>Overall GPA: 3.87/4.00, GPA in ASTR courses 300 level and above: 3.99/4.00</i> | |

Research

Interests: *Galaxy mergers, galactic evolution, star-forming regions, Integral Field*

Spectroscopy

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| Research Assistant - <i>University of Victoria, Dr. Sara Ellison</i> | 2017 - Present |
| Investigate star formation rate enhancement in interacting galaxy pairs and post-mergers as a function of radius with the SDSS MaNGA integral field spectroscopy survey. | |
| Research Assistant - <i>University of Washington, Dr. Emily Levesque</i> | 2016 - 2017 |
| Analyze parameters of star forming regions in nearby galaxies through spectroscopic data. Characterize a gamma ray burst galaxy host complex using Gemini Multi-Object Spectrograph (South) data. | |
| Compile and Analyze Data - <i>University of Washington, Dr. Woodruff Sullivan</i> | 2015 - 2016 |
| Study the declination of the sun with meridian line in Rome's Santa Maria Degli Angeli Basilica to gain understanding of ancient observational methods, collect data from images of solar transit over the line and compute declination from the meridian line's scale. | |

Awards

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| • The R.M. Petrie Memorial Fellowship (\$1463, \$ 3577) | 2019, 2020 |
| • L.E. Frances Druce Award in Science (\$4055) | 2019 |
| • Mitacs Globalink Research Award (\$6000) | 2019 |
| • James A. & Laurette Agnew Memorial Award (\$2188) | 2018 |
| • University of Victoria Graduate Fellowship (\$8000) | 2017 |
| • University of Victoria Graduate Entrance Award (\$5000) | 2017 |
| • University of Washington Dean's List | 2014 - 2017 |
| • UW Baer Award for astronomy scholarship and research | 2016 |

Meetings & Presentations

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| • Australia-ESO Joint Conference: Linking galaxies from the Epoch of initial star-formation to today | February 2019 |
| Talk: Spatially resolved star formation and metallicity profiles in post-merger galaxies from MaNGA | |

- 49th annual meeting of the Canadian Astronomical Society, Victoria Canada May 2018
Poster: Spatial Distribution of Star Formation Rate and Other Properties of MaNGA Post-Merger Galaxies
- Mary Gates Undergraduate Research Symposium, Seattle WA May 2017
Talk: A Spatially Resolved Study of the GRB 020903 Host Complex
- 229th American Astronomical Society Meeting, Grapevine TX January 2017
Poster: A Spatially - Resolved Study of the GRB 020903 Host Complex

Publications

First Author Contributions

- Thorp, M.**, Ellison, S.L., Simard, L., Sánchez, S.F., Antonio, B. “Spatially resolved star formation and metallicity profiles in post-merger galaxies from MaNGA”, 2019, MNRAS, 482, L55-59.
- Thorp, M.** and Levesque, E. "A spatially resolved study of the GRB 020903 host galaxy", 2018, ApJ, 856, 36.

Other Publications

- Bluck, A. F. L., Maiolino, R., Sanchez, S., Ellison, S. L., **Thorp, M.**, Piotrowska, J., Teimoorinia, H., Bundy, K., “Are galactic star formation and quenching governed by local, global or environmental phenomena?”, 2020, MNRAS, 492, 96.
- Ellison, S., **Thorp, M.**, Lin, L., Pan, H.A., Teimoorinia, H., Bluck, A., Scudder, J., Sánchez, S., Sargent, M. “The ALMaQUEST Survey III: Scatter in the resolved star forming main sequence is primarily due to variations in star formation efficiency”, 2019, 2020, MNRAS, 493, L39.
- Ellison, S., **Thorp, M.**, Lin, L., Pan, H.A., Scudder, J., Bluck, A., Sánchez, S., Sargent, M.. “The ALMaQUEST Survey II – What drives central starbursts at $z \sim 0$?”, 2020, MNRAS, 492, 6027.
- Bottrell, C., Hani, M., Teimoorinia, H., Ellison, S., Moreno, J., Torrey, P., Hayward, C., **Thorp, M.**, Simard, L. ‘The importance of observational realism in deep learning classifications of galaxy mergers’, 2019, MNRAS, 490, 5390.
- Lin, L., Pan, H-A., Ellison, S. L., Belfiore, F., Shi, Y., Sánchez, S.F., Hsieh, B.C., Rowlands, K., Ramya, S., **Thorp, M.**, Li, C., Maiolino, R. ‘The ALMaQUEST Survey: The molecular gas main sequence and the origin of the star forming main sequence’, 2019, ApJL, 884, L33
- Woodruff Sullivan, **Mallory Thorp**, Guadalupe Tovar, Jennifer Look. "Modern observations using the 1702 Meridian Line of the Basilica of Santa Maria degli Angeli e dei Martiri (Rome)". The British Sundial Society: Bulletin, vol. 29(3), pp. 2 - 12. September 2017.

Skills

Computer Skills

- Python
- IRAF/PYRAF
- C Shell
- SQL
- LaTeX
- Mathematica

Other

- Public Speaking for STEM Topics
- Educational and Lecturing Techniques
- Operating Manastash Ridge Observatory
- WorldWide Telescope Presentations

Volunteer Experience

- Physics and Astronomy Graduate Student Association: CUPE 1463 Steward 2018 - Present
- Organizer and chair, University of Victoria Astronomy Summer Seminar Series 2018 - Present
- Victoria Nerd Nite Volunteer 2018 - Present

- Theodore Jacobsen Observatory volunteer: Assist at observatory open house and present astronomy based public lectures 2013 - 2017
- UW Astronomy Club outreach and tutoring 2013 - 2017
2017 Club President
- UW planetarium presentations 2014 - 2017
- Undergraduate representative for UW astronomy undergraduate curriculum committee 2016 - 2017

Paid Work Experience

- Teaching Assistant, Astro 102: Introduction to Astronomy 2017 - Present
University of Victoria
- Astronomy 3xx series class grader 2016 - 2017
University of Washington. Astro 321: The Solar System, Astro 322: Content of our Galaxy, Astro 323: Extragalactic Astronomy and Cosmology
- "Astro 150: Planets" online class grader 2016
University of Washington