Allison Crossland

Curriculum Vitae

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EDUCATION

Bachelor of Science, Astronomy & Physics **Sept 2020 - June 2023**
University of Washington *Seattle, WA*

- Honors in Astronomy
- GPA in astronomy and programming courses: 3.8
- Upper-level courses: high-energy astrophysics, scientific writing, astronomical data analysis, astronomical observation, astrostatistics and machine learning, stellar observations and theory, nuclear and particle physics laboratory

RESEARCH EXPERIENCE

Research Assistant **June 2023 - Aug 2023**
DiRAC Institute, University of Washington
Advisors: Prof. Eric Bellm, David Wang

- Searched for optical outbursts of X-ray binaries in time series data
- Monitored daily alerts from the Zwicky Transient Facility alert stream
- Acquired and analyzed data from SWIFT and MAXI X-ray telescopes

Undergraduate Research Assistant **Oct 2022 - June 2023**
DiRAC Institute, University of Washington
Advisor: Prof. Eric Bellm

- Conducted a search for gravitational self-lensing signatures from compact binaries
- Wrote python code to analyze a set of thousands of lightcurves with identified bright pulses

PUBLICATIONS

A. Crossland, E. C. Bellm, C. Klein, J. R. A. Davenport, et al., *A Pilot Search for Gravitational Self-Lensing Binaries with the Zwicky Transient Facility,* submitted to the Open Journal of Astrophysics (arXiv:2311.17862).

Y. Wang, E. C. Bellm, **A. Crossland**, et al. (2023), *An Optical Search for New Outbursting Low Mass X-Ray Binaries,* accepted to ApJ (arXiv:2311.18150).

PRESENTATIONS

First Results from a Search for Gravitational Self-Lensing Binaries with the Zwicky Transient Facility **May 2023**
Seattle, WA
UW Undergraduate Research Symposium (Talk)

First Results from a Search for Gravitational Self-Lensing Binaries with the Zwicky Transient Facility **Jan 2023**
Seattle, WA
AAS 241 Meeting (Poster)

LEADERSHIP & VOLUNTEER EXPERIENCE

Women+ in Physics at UW **Nov 2022 - June 2023**
Outreach Officer

- Co-founded a club for UW students of marginalized gender in physics and astronomy
- Organized professional development and community events such as coffee chats with female professors and coding workshops

Supporting Women+ in Physics Conference **April 2023 - May 2023**
Lead Volunteer Coordinator

- Worked with faculty members to organize a workshop to support students of marginalized gender in physics and astronomy

DiRAC Institute Planetarium Event **Nov 2023**
Volunteer

- Volunteered at a planetarium event hosted by the DiRAC Institute at the University of Washington
- Assisted in setting up for the event and greeting guests

OTHER WORK EXPERIENCE

Head Lifeguard and Swim Instructor **May 2017 - Sept 2022**
Wedgwood Swim Club *Seattle, WA*

- Provided lifeguarding services at a swimming pool
- Supervised a team of 4-5 lifeguards during lifeguard shifts
- Taught swimming technique and water safety skills to children age 3-12

Youth Water Polo Coach **Feb 2020 - May 2022**
Rain City Water Polo *Seattle, WA*

- Led practices for a competitive youth water polo team
- Provided instruction on technical skills for players at a wide range of skill levels
- Encouraged teamwork and a supportive environment for players

SKILLS

- Python
- LaTeX
- SQL
- Data reduction and photometry
- Acquiring optical data at a telescope
- Remote telescope observing